

BOARD MEETING AGENDA

Board Room Coon Creek Watershed District Offices

Monday, June 17, 2024

12:00 p.m.

Board of Managers:

Jim Hafner, President; Erin Lind, Vice President; Jason Lund, Secretary; Mary Campbell, Treasurer; Dwight McCullough, Member at Large

Note: Individuals with items on the agenda or who wish to speak to the Board are encouraged to be in attendance when the meeting is called to order.

- 1. Call to Order**
- 2. Approval of the Agenda** (*Additions/Corrections/Deletions*)
- 3. Announcements**
- 4. Open Mic/Public Comment**

*Members of the public at this time may address the Board, for **up to three minutes**, on a matter not on the Agenda. Individuals wishing to be heard must sign in with their name and address at the door. Additional comments may be accepted in writing. Board action or discussion should **not** be expected during the presentation of public comment/open mic. Board members may direct staff to research the matter further or take the matter under advisement for consideration at a future Board meeting.*

CONSENT ITEMS

The consent agenda is considered as one item of business. It consists of routine administrative items or items not requiring discussion. Items can be removed from the consent agenda at the request of a Board member, staff member or a member of the audience.

- 5. Approval of Minutes of June 10, 2024**

POLICY ITEMS

- 6. Election of Officers**

PERMIT ITEMS

- 7. Allstate Distributions Commercial Building**
- 8. Logan Park**
- 9. 2024 SW Street Reconstruction**

DISCUSSION ITEMS

- 10. Administrator Review (At Board Meeting – ABM)**

INFORMATIONAL ITEMS

- 11. 6PPD-Q and research collaboration by USGS with CCWD**

ADJOURN

COON CREEK WATERSHED DISTRICT BOARD OF MANAGERS' MEETING

The Board of Managers of the Coon Creek Watershed District held their regular meeting on Monday, June 10, 2024, at the Coon Creek Watershed District Office.

1. Call to Order

The meeting was called to order at 5:30 PM

Board Members Present: Erin Lind, Jim Hafner, & Dwight McCullough

Board Members Absent: Jason Lund & Mary Campbell

Staff Present: Tim Kelly, Bobbie Law, Jessica Lindemyer, Abbey Lee, Jon Janke & Michelle Ulrich

2. Approval of the Agenda

Board Member McCullough moved to amend the agenda, moving Permit Items 11,12, and 13 to the Consent Agenda. Seconded by Board Member Lind. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

Board Member Lind moved to approve the amended agenda. Seconded by Board Member McCullough. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

3. Announcements

None.

4. Open Mic/Public Comment

No one was present for comment.

CONSENT ITEMS

5. Approval of Minutes of May 28, 2024

8. Approval of Bills:

Claims totaling \$47,961.27 on the following disbursement list will be issued and released upon Board approval.

Vendor	Amount
V0002--DOERING, DAWN R	27.45
V0008--US BANK	4,569.93
V0010--A1 FLOOR AND CARPET CARE INC	1,076.25
V0024--CITY OF ANDOVER	1,284.67
V0030--CONNEXUS ENERGY	232.42
V0052--LOFFLER COMPANIES INC	119.69
V0052--LOFFLER COMPANIES INC	170.78
V0054--MICHELLE J ULRICH PA	5,482.00
V0138--RMB ENVIRONMENTAL LABORATORIES INC	1,125.00
V0221--ABDO LLP	3,327.50
V0221--ABDO LLP	940.00
V0237--EMMONS AND OLIVIER RESOURCES INC	2,268.00
V0242--METRO I NET	1,528.18
V0242--METRO I NET	5,398.00
V0247--POOP 911 OF MPLS STP LLC	731.40
V0249--PLAUDIT DESIGN	480.00
V0265--MANOR ELECTRICAL INC	700.00
V0299--MP+G MARKETING SOLUTIONS LLC	18,500.00
Grand Total	47,961.27

The following Permit Items were moved to the Consent Agenda.

11. 24-009 Airport Road

The purpose of this project, located in Blaine, is for a reclamation and partial reconstruction of Airport Road and an in-kind culvert replacement.

The staff recommendation was to approve permit application number P-24-009 with 2 conditions and 2 stipulations as presented in the staff report:

Conditions to be Met Before Permit Issuance:

Rule 2.7 – Procedural Requirements

1. Submittal of a performance escrow in the amount of \$6,455.00.

Rule 4.0 – Soils and Erosion Control

2. Update the erosion and sediment control plan to include the following:
 1. Update Sheet C041 to stabilize soils and soil stockpiles within 24 hours of inactivity.
 2. Show double row of perimeter control on west side of Airport Road due to potential nearby wetlands.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, the applicant agrees to these stipulations:

1. Submittal of as-built (invert, pipe material, pipe size) for culvert installation within County Ditch 41.
2. If dewatering is required, provide DNR dewatering permit prior to construction. If a DNR permit is not required, provide well-field location, rates, discharge location, schedule and quantities prior to construction.

12. 24-024 Trunk Water & Sewer Main

The purpose of this project, located in Andover, is to directional drill for sanitary sewer and water main utilities, open-cut installation of sanitary sewer and water main utilities, and pavement patch reconstruction.

The staff recommendation was to approve permit application number P-24-024 with 2 conditions and 1 stipulation as presented in the staff report:

Conditions to be Met Before Permit Issuance:

Rule 2.7 – Procedural Requirements

1. Submittal of a performance escrow in the amount of \$4,850.00.

Rule 4.0 – Soils and Erosion Control

2. Update the erosion and sediment control plan to include double rows of perimeter control near delineated wetlands and the stabilization of soils within 24 hours of inactivity.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit.

By accepting the permit, the applicant agrees to these stipulations:

1. Submittal of as-builts for the watermain crossing under County Ditch 20 that shows 4-foot separation is maintained between the bottom of ditch (870.8 ft, NAVD 88) and top of utility line.

13. 24-025 Bunker Hills Beach Water & Sewer

The purpose of this project, located in Andover, is to install sewer and water utilities.

The staff recommendation was to approve permit application number P-24-025 with 2 conditions as presented in the staff report:

Conditions to be Met Before Permit Issuance:

Rule 2.7 – Procedural Requirements

1. Submittal of a performance escrow in the amount of \$2,220.00.

Rule 4.0 – Soils and Erosion Control

2. Update the erosion and sediment control plan to include a note to stabilize soils within 24 hours of inactivity.

Board Member McCullough moved to approve the consent agenda items. Seconded by Board Member Hafner. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

POLICY ITEMS

9. Election of Officers

Board Member Lind moved to table agenda item 9, election of officers, until the June 17th regular Board meeting. Seconded by Board Member McCullough. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

10. Annual Public Meeting on Storm Water Pollution Prevention Plan (SWPPP)

Mr. Kelly noted that holding an annual public meeting is a requirement of the MS4 program. He explained that the lack of turnout for these meetings is an “age-old issue” and is common across the State of Minnesota. No one from the public was present for the annual public meeting, but a slideshow was presented to the Board regarding the District’s MS4 SWPPP efforts. The staff made the recommendation to hold the public meeting, call for comment, and then adjourn.

President Hafner called to order the public meeting.

Mr. Kelly gave a presentation on the SWPPP program, highlighting the program’s history, purpose, requirements, and control measures.

Board Member Lind moved to close the annual public meeting on Stormwater Pollution Prevention Plan. Seconded by Board Member McCullough. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

Board Member Hafner moved to receive the report. Seconded by Board Member Lind. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

PERMIT ITEMS

All permit items were moved to the consent agenda.

DISCUSSION ITEMS

14. 2025 Program Budget

Mr. Kelly advised the program budget is in draft form. It was explained that what is currently presented is the projected full expenditure side of the budget; with revenue details to come later in July.

The Board discussed the pet waste station program with a focus on plans to expand the program. Administrator Kelly explained that the program would be built upon in the coming year. The continuation of the program will include a community survey.

Board Member Lind moved to receive the report. Seconded by Board Member McCullough. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

15. 2024 Tour Itinerary

Mr. Kelly highlighted the date for the tour next week, June 17th at noon. A tour will follow the regular meeting. He highlighted the different format of the tour that is planned with multiple stops looking at 3 focused areas/projects. The Board agreed that they were pleased with the proposed tour route and schedule proposed by staff. No additional stops were added to the tour based on the discussion .

INFORMATIONAL ITEMS

This article outlines Anoka County's action and the collaborative nature of the proposed Lower Coon Creek project. Mr. Janke outlined the project schedule. The project is scheduled to go out for bid in the summer of 2024 and begin construction in the winter of 2024-25.

ADJOURN

Board Member McCullough moved to adjourn at 6:12 p.m. Seconded by Board Member Lind. The motion carried with 3 yeas (Board Members Lind, Hafner, and McCullough) and no nays.

President

**COON CREEK WATERSHED DISTRICT
Request for Board Action**

MEETING DATE: June 17, 2024
AGENDA NUMBER: 7
ITEM: Election of Officers

POLICY IMPACT: Policy

ACTION REQUESTED

Hold elections for required statutory offices

BACKGROUND

The District has traditionally held elections for Board offices at the first meeting following the organic date and potential appointment of new Manager(s) by the County Board.

PERTINENT FACTS

Minnesota Statutes 103D.315 Subd. 3. **Officers.** ...the managers must elect different managers as president, secretary and treasurer.

District Bylaws, adopted in 2023 (Article VI, Section 1), stipulates that the Board of Managers shall have four officers:

1. President
2. Vice-President
3. Secretary
4. Treasurer

ISSUES/CONCERNS/RISKS

Current Officers

Office	2022	Elect
President	Jim Hafner	
Vice-President	Erin Lind	
Secretary	Jason Lund	
Treasurer	Mary Campbell	

OPTIONS FOR ACTIONS

1. Hold elections for each office

RECOMMENDATION

Hold elections for all offices.

Permit Application Review Report
Date: 6/12/2024

Board Meeting Date: 6/17/2024
Agenda Item: 7

Applicant/Landowner:

Glen Harstad
14152 Terrace Blvd
Ham Lake, MN 55304

Project Name: Allstate Distributions Commercial Building

Project PAN: P-24-026

Project Purpose: construct a commercial building, drive-in doors, and parking with associated stormwater treatment features

Project Location: 13850 Lincoln Street NE, Ham Lake

Site Size: size of parcel - 2.26 acres; size of disturbed area - 2.1 acres; size of regulated impervious surface - 1.05

Applicable District Rule(s): Rule 2, Rule 3, Rule 4, Rule 5, Rule 6

Recommendation: Approve with 3 Conditions and 2 Stipulations

Description: The project proposes the construction of a new commercial building, parking, and associated stormwater treatment features. The project will disturb 2.1 acres and create 1.05 acres of new/regulated impervious. The site is within the County Ditch 57 subwatershed and largely drains through an existing regional pond and towards County Ditch 59-1. The relevant water resource concerns are stormwater treatment, erosion and sediment control, wetlands, and floodplain. These correlate to District Rules 3, 4, 5 and 6. See attached Figure 1: Project Location and Figure 2: Site Plan.

Conditions to be Met Before Permit Issuance:

Rule 2.7 – Procedural Requirements

1. Submittal of a performance escrow in the amount of \$3,050.00.

Rule 3.0 – Stormwater Management

2. Provide proof of recording of a fully executed Operations and Maintenance Agreement for the perpetual inspection and maintenance of all proposed stormwater management practices after review and approval by the District.

Rule 4.0 – Soils and Erosion Control

3. Update the erosion and sediment control plan to stabilize soils and soil stockpiles within 24 hours of inactivity.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, the applicant agrees to these stipulations:

1. If dewatering is required, provide DNR dewatering permit prior to construction. If a DNR permit is not required, provide well-field location, rates, discharge location, schedule and quantities prior to construction.
2. Submittal of as-builts for the stormwater management practices and associated structures listed in Tables 2 and 3, including volume, critical elevations and proof of installation for hydrodynamic separators.

Exhibits:

Exhibit Type	Exhibit Author	Signature Date	Received Date
Joint Application	Jacobson Environmental PLLC	05/06/2024	05/06/2024
Wetland Delineation	Jacobson Environmental, LLC.	04/30/2019	05/06/2024
Site Drainage Narrative & Calculations	Plowe Engineering, Inc.	05/23/2024	05/24/2024
Geotechnical Report	Haugo Geotechnical Services	05/15/2024	05/24/2024
Geotechnical Exploration Report	Haugo Geotechnical Services	03/23/2020	05/24/2024
Site Survey	E.G. Rud & Sons, Inc.	05/02/2024	05/07/2024
Construction Plans	Plowe Engineering, Inc.	05/23/2024	05/24/2024

Findings

Fees and Escrows (Rule 2.7):

The applicant has submitted a \$4310 application fee and deposit which corresponds with the nonrefundable application fee (\$10), base fee for a Commercial/Industrial Development project of 2.26 acres (\$4,000.00), and addition to base fee (\$300.00). The applicant will be required to submit a performance escrow in the amount of \$3050.00. This corresponds to a base escrow of \$2,000, plus an additional \$500/acre of disturbance (2.1 acres of land disturbance proposed).

Stormwater Management (Rule 3.0):

Rule 3.0 applies to the proposed project because it includes land disturbing activities creating a cumulative total of 10,000 sf or more of new or fully reconstructed impervious surface.

The Hydrologic Soil Group (HSG) of soils on site are HSG B. The proposed project incorporates soil amendments in accordance with District guidelines.

Rate Control: Peak stormwater flow rate at most points of site discharge does not increase from the pre-development condition for the 24-hour precipitation event with a return frequency of 2-, 10-, 100- years as shown in Table 1. The minor increases in the 2-year event for both discharge points are within model tolerance. The project will not impact Drainage Sensitive Use areas. The rate control standard is met.

Point of	2-year (cfs)	10-year (cfs)	25-year (cfs)	100-year (cfs)
----------	--------------	---------------	---------------	----------------

Discharge	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
Lincoln St	0.1	0.16	0.45	0.43	0.77	0.7	1.43	1.27
East - Regional Pond	0.29	0.44	1.01	1	1.77	1.58	2.99	2.45

Table 1.

Volume Control: The proposed project is new development; therefore, the volume reduction requirement is equal to 1.1 inches over the area of all impervious surface. The amount of proposed impervious required to be treated is 45,709 ft². The Lincoln St Drainage area cannot be treated as it slopes steeply toward the frontage road and treatment here is infeasible. This untreated area makes up roughly 3% of the total site impervious.

The applicant is proposing the Stormwater Management Practices (SMPs) described below:

Drainage Area	Impervious required to be treated (ft ²)	Proposed SMP	TP Removal Factor	Required Water Quality Volume (ft ³)	Water Quality Volume Provided (ft ³)
Lincoln St	1,508	none	0	276	0
NURP Basin	44,201	NURP Pond	0.5	8,104	18,997
Totals:	45,709			8,380	18,997

Table 2.

Infiltration may not be used as a volume control practice because the practice would need to be placed in areas with less than three feet of separation from the bottom of the infiltration system to the seasonally saturated soils or the top of bedrock.

Geotechnical information from March 2020 and May 2024 has been submitted which indicates that seasonally high saturated soils are likely at an approximate elevation of 892 ft MSL. The bottom of an infiltration system would need to be at elevation 895 ft or above. This is infeasible because surrounding topography (including the low elevations on Lincoln St for driveway slope), the entire site would need to be raised significantly. Subsequently creating steep and unsafe driveway entrances.

Because the volume reduction standard cannot be met due to these site constraints, the project proposes the use of the stormwater management practices and their corresponding TP conversion factors listed in Table 2. The volume control standard has been met to the maximum extent practicable as shown in Table 2.

Water Quality: The total Water Quality Volume has been provided in aggregate.

Stormwater treatment on site must remove at least 80% of the average annual post development TSS per discharge location. The following TSS removal has been provided:

Discharge Point	TSS Removal Provided
East - Regional	84

Table 3.

The TSS removal standard is met at each discharge point as shown in Table 3.

Discharges to Wetlands: Stormwater from the proposed project is being discharged into an onsite wetland. The wetland is currently being utilized as a stormwater pond, which receives untreated stormwater from the parcel to the south. Because it is already being used as stormwater treatment, bounce and inundation calculations were not required.

Landlocked Basins: The proposed drainage system does not outlet to a landlocked basin, therefore

this section does not apply.

Low Floor Freeboard: The proposed project is new development which includes buildings and habitable structures. Therefore, SMPs must be designed such that the lowest basement floor elevations are at least 2 feet above the 100-yr high water level and 1 foot above the emergency overflow. The lowest basement floor elevation proposed is 897.05 MSL. The applicable 100-year high water level is at 894.2 MSL and the applicable emergency overflow is at 894.2 MSL. The freeboard requirement is met.

Maintenance:

Access: Sufficient maintenance access has been provided on the plans for all stormwater management practices.

Easements: All required maintenance easements have been provided on the plans.

Maintenance Agreements: The proposed stormwater management practices will not be maintained as part of standard municipal public work activities. Therefore, a maintenance agreement that meets District standards will be required.

Soils and Erosion Control (Rule 4.0)

Rule 4.0 applies to the proposed project because it is a land disturbing activity that requires a permit under another District rule.

The proposed project drains to County Ditch 59-1. The soils affected by the project include Isanti, Lino and Zimmerman and have a soil erodibility factor of 0.15 or greater. Disturbed areas are not proposed to be stabilized within 24 hours, as required. The proposed erosion and sediment control plan includes construction entrance, inlet protection, riprap, and perimeter control. The erosion control plan does not meet District requirements because soils and soil stockpiles are not proposed to be stabilized within 24 hours of inactivity.

Wetlands (Rule 5.0)

Wetlands exist on site, but no impacts are proposed to the regulated wetland. The boundary and type application was reviewed and approved. Wetlands were delineated under PAN 19-128 and determined all but one wetland to be incidental. The Notice of Decision was issued on 05/01/2019. The applicant submitted a joint application form requesting an extension to an existing No Loss decision on 05/05/2024. The TEP agrees that the proposed project meets the requirements for an extension to the No Loss Decision under Rule 8420. The extended Notice of Decision was issued on 05/08/2024.

Floodplain (Rule 6.0)

Rule 6.0 applies to the proposed project because it includes land disturbing activities within or adjacent to the boundary of the 100-year flood elevation as mapped and modeled by the District.

The regulatory floodplain elevation is 891.2 ft MSL. The application proposes the placement of 53 cubic yards of fill within the floodplain. Compensatory storage is required. The proposed project provides 66 cubic yards of compensatory storage, which exceeds the required 1:1 ratio and is within the relevant reach.

The proposed project is subject to flood damage. Low floor elevations are proposed at elevation 897.05 ft MSL, which meets the minimum floor elevation of 2 foot above the 100-year flood profile.

The proposed fill within the floodplain is a structure. Information has been provided to show that the Structure can pass the 100-year flood without increasing the elevation of the 100-year flood profile or creating excessive velocities. See attached Figure 4: Floodplain Impacts.

Drainage, Bridges, Culverts, and Utility Crossings (Rule 7.0)

The proposed project does not include land disturbing activities which construct, improve, repair, or alter the hydraulic characteristics of a bridge profile control or culvert structure on a creek, public ditch, or major watercourse. The proposed project does not include land disturbing activities which involve a pipeline or utility crossing of a creek, public ditch, or major watercourse.

The proposed project does not include land disturbing activities which construct, improve, repair or alter the hydraulic characteristics of a conveyance system that extends across two or more parcels of record not under common ownership and has a drainage area of 200 acres or greater. Rule 7.0 does not apply.

Buffers (Rule 8.0)

The proposed project does not include a land disturbing activity on land adjacent or directly contributing to a Public Water, Additional Waters, High or Outstanding Ecological Value Waters, a Public Ditch, or Impaired Waters/waters exceeding state water quality standards. Rule 8.0 does not apply.

Variations (Rule 10.2)

The proposed project is not requesting a variance from the District's rules, regulations, and policies. Rule 10.2 does not apply.

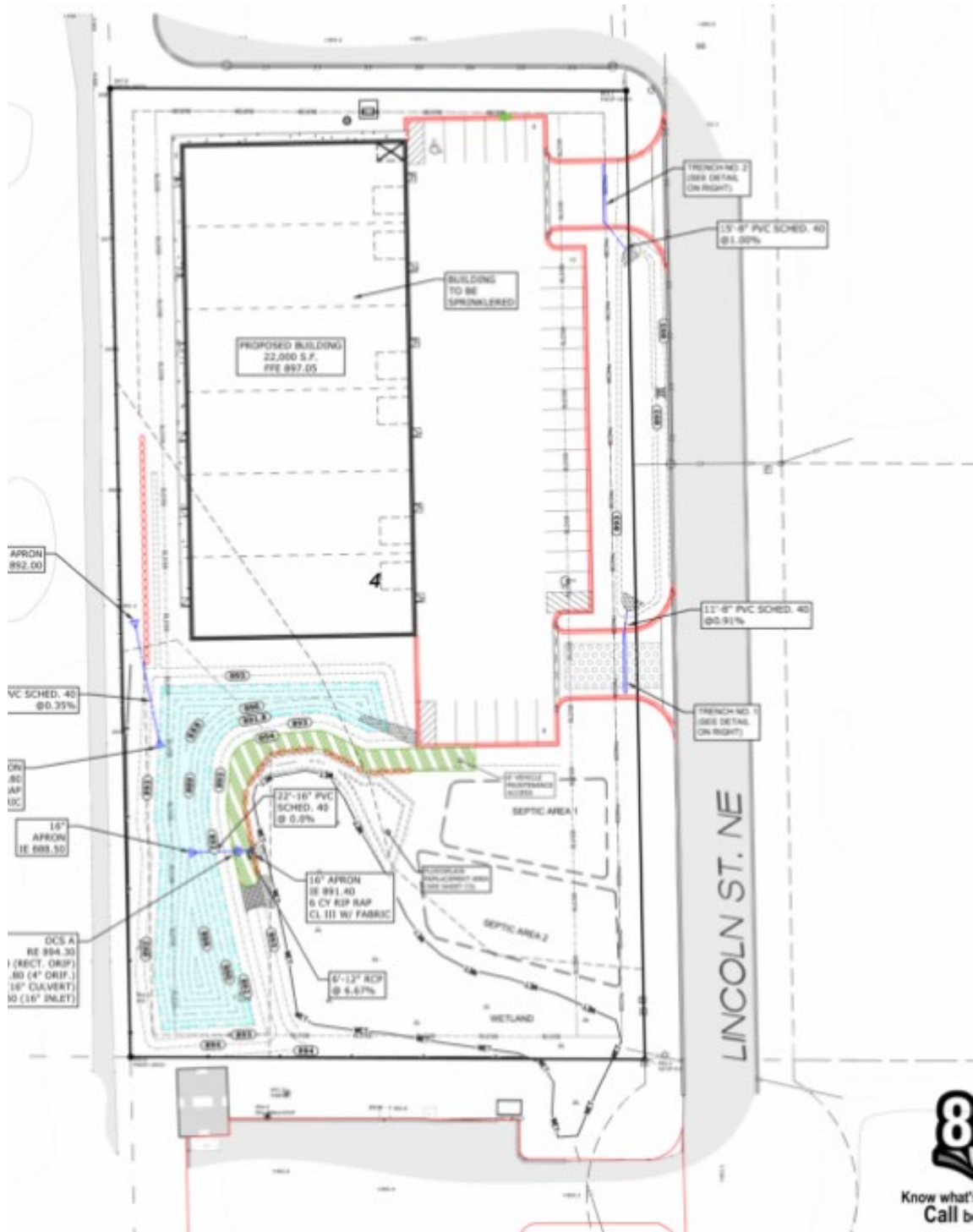


Figure 2: Site Plan

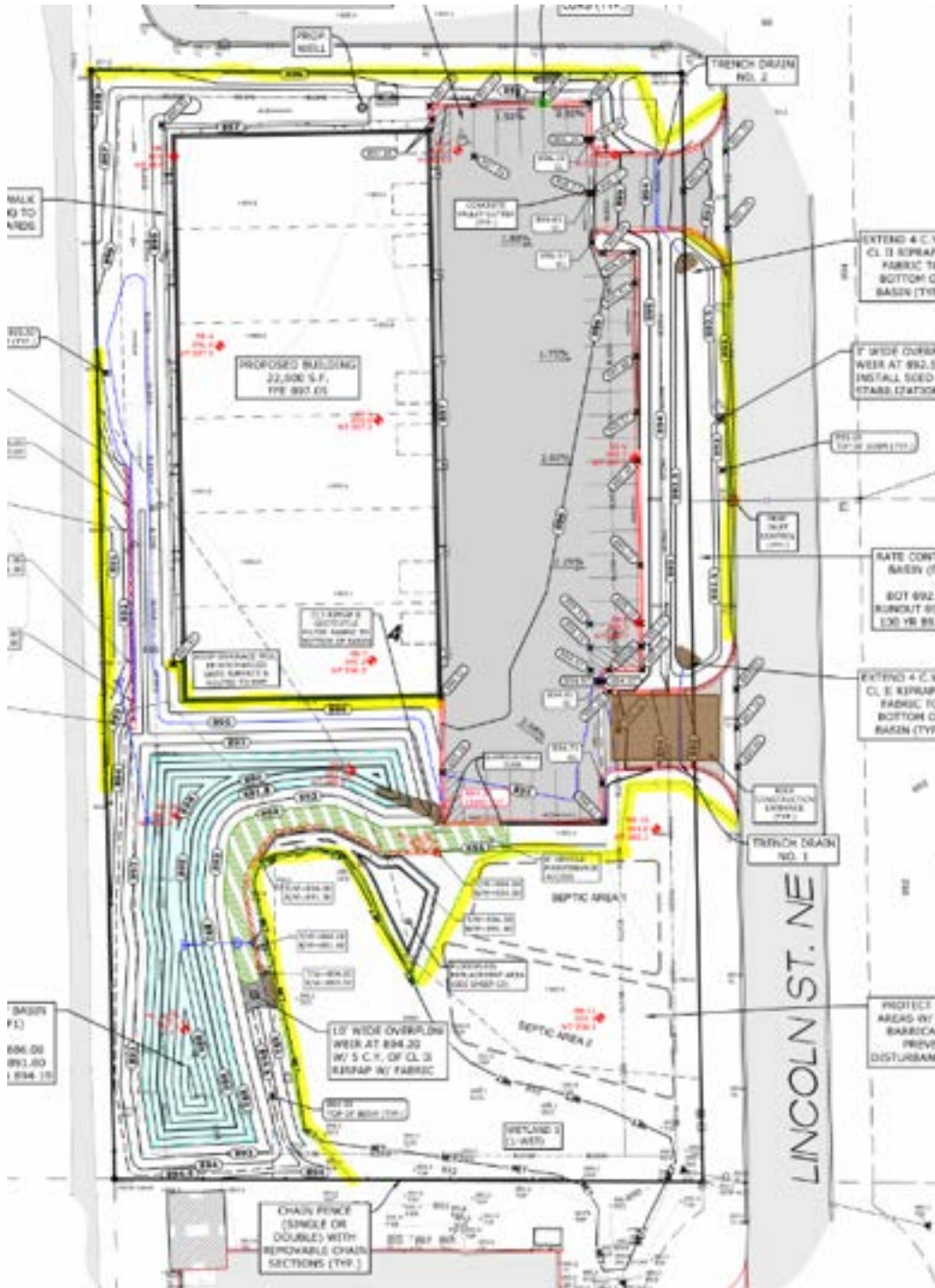


Figure 3: Erosion and Sediment Control Plan

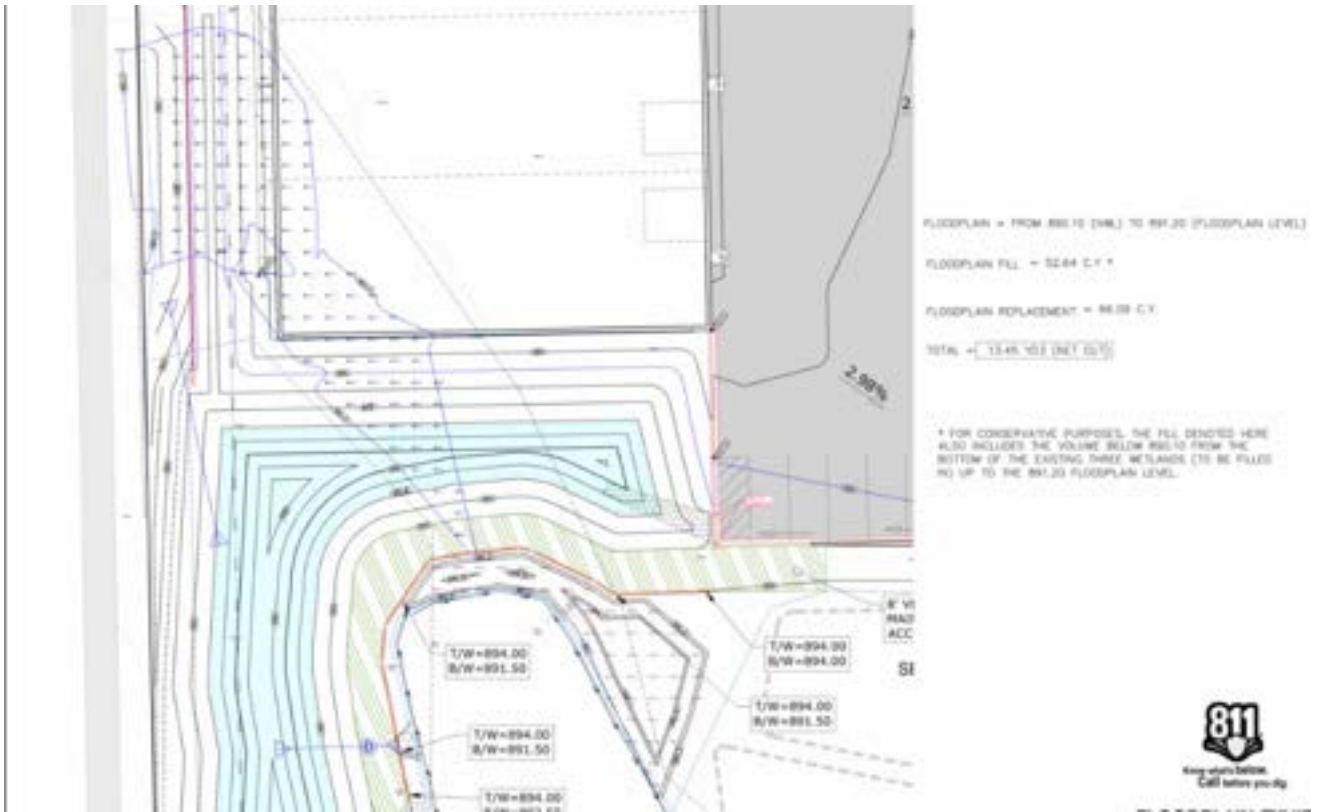


Figure 4: Floodplain Impact

ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING

TITLE SHEET, LEGEND, EXISTING CONDITIONS, & REMOVAL PLAN

HAM LAKE, MINNESOTA

VICINITY MAP



NOT TO SCALE

LEGEND *

—OHW—	EXISTING OVERHEAD ELECTRIC	— — —	PROPOSED WATER PIPE
—TEL—	EXISTING UNDERGROUND TELEPHONE	— — —	PROPOSED SANITARY SEWER PIPE
—CBL—	EXISTING UNDERGROUND CABLE	— — —	PROPOSED STORM SEWER PIPE
□	EXISTING TELEPHONE PEDESTAL	— — —	PROPOSED DRAINTILE AND CLEAN-OUT
□	EXISTING ELECTRICAL PEDESTAL	—ELEC—	PROPOSED ELECTRIC SERVICE *
□	EXISTING CABLE PEDESTAL	—GAS—	PROPOSED GAS SERVICE *
□	EXISTING UTILITY POLE	—TEL—	PROPOSED TELEPHONE SERVICE *
☆	EXISTING LIGHT POLE	⊙	PROPOSED STORM MANHOLE
—>>>	EXISTING STORM SEWER	□	PROPOSED CATCH BASIN
— — —	EXISTING WATER MAIN	□	PROPOSED FLARED-END SECTION
—>>>	EXISTING SANITARY SEWER	⊗	PROPOSED GATE VALVE
—FM—	EXISTING FORCEMAIN	⊗	PROPOSED HYDRANT
⊙	EXISTING STORM MANHOLE	⊙	PROPOSED SANITARY SEWER MANHOLE
□	EXISTING CATCH BASIN	— — —	PROPOSED CONTOUR
◀	EXISTING FLARED-END SECTION	⊗	PROPOSED SPOT ELEVATION (GUTTERLINE, BITUMINOUS SURFACE, OR GROUND SURFACE UNLESS OTHERWISE INDICATED)
⊗	EXISTING GATE VALVE	—S—	PROPOSED SILT FENCE
⊗	EXISTING HYDRANT	—4.0%	PROPOSED DIRECTION OF DRAINAGE
⊗	EXISTING WELL	■	PROPOSED BITUMINOUS
⊙	EXISTING SANITARY SEWER MANHOLE	■	PROPOSED RIP-RAP
⊗	EXISTING CONTOUR	○	PROPOSED INLET PROTECTION
⊗	EXISTING SPOT ELEVATION	■	PROPOSED HEAVY-DUTY PAVEMENT
⊗	EXISTING SPOT ELEVATION (MATCH INTO ELEVATION)	■	PROPOSED ENKAMAT
⊗	EXISTING BITUMINOUS	■	PROPOSED TIP-OUT CURB
⊗	EXISTING TREES	○	PROPOSED RETAINING WALL
⊗	EXISTING TREE TO BE REMOVED	○	PROPOSED RETAINING WALL
○	EXISTING RETAINING WALL		
—x—	EXISTING FENCE		
—WET—	EXISTING WETLAND		

* NOT ALL SYMBOLS ARE APPLICABLE.

GENERAL NOTES

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF EXISTING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UTILITIES AS NECESSARY TO AVOID DAMAGE TO THESE UTILITIES.

CALL "811" FOR EXISTING UTILITIES LOCATIONS PRIOR TO ANY EXCAVATIONS.

THE CONTRACTOR SHALL FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING SANITARY SEWER, STORM SEWER, AND WATER MAIN AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF INSTALLATIONS.

INSTALLATIONS SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS AND DETAIL PLATES.

ALL UTILITIES THAT WILL BE OWNED AND MAINTAINED BY THE CITY AFTER CONSTRUCTION SHALL BE BUILT TO CITY STANDARDS.

THE CONTRACTOR SHALL NOTIFY CITY PUBLIC WORKS DEPARTMENT A MINIMUM OF 24 HOURS PRIOR TO THE INTERRUPTION OF ANY SEWER OR WATER SERVICES TO EXISTING HOMES OR BUSINESSES.

THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE CITY PRIOR TO ANY WORK.

STORAGE OF MATERIALS OR EQUIPMENT SHALL NOT BE ALLOWED ON PUBLIC STREETS OR WITHIN PUBLIC RIGHT-OF-WAY.

NOTIFY CITY A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ALL ELECTRIC, TELEPHONE, AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.



SHEET INDEX

- C0 TITLE SHEET, LEGEND, EXISTING CONDITIONS, & REMOVAL PLAN
- C1 GRADING, DRAINAGE & EROSION CONTROL PLAN
- C2 UTILITY PLAN
- C3.1 DETAILS & NOTES
- C3.2 DETAILS & NOTES
- C4 SOIL AMENDMENT PLAN
- C5 FLOODPLAIN EXHIBIT
- C6.1 STORM WATER POLLUTION PREVENTION PLAN
- C6.2 STORM WATER POLLUTION PREVENTION PLAN

DRAWN BY:	DESIGN BY:
M.Q.A.	Q.M.A.
CHKD BY:	PROJ. NO.
M.Q.A.	24-2141
ORIGINAL DATE:	
MAY 3, 2024	

DATE	REVISION DESCRIPTION

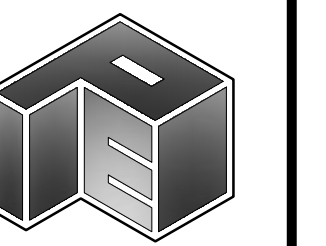
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

PROFESSIONAL ENGINEER
CASEM M. ABUGHAZLEEN
 LIC. NO. 56289
 DATE: 05.23.2024

ALLSTATE DISTRIBUTIONS
COMMERCIAL BUILDING
 HAM LAKE, MINNESOTA

TITLE SHEET, LEGEND, EXISTING CONDITIONS, AND REMOVAL PLAN

PREPARED FOR:
GLEN HARSTAD

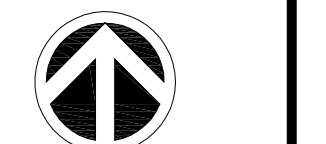


SITE PLANNING & ENGINEERING

POLOWE ENGINEERING, INC.

6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

NORTH

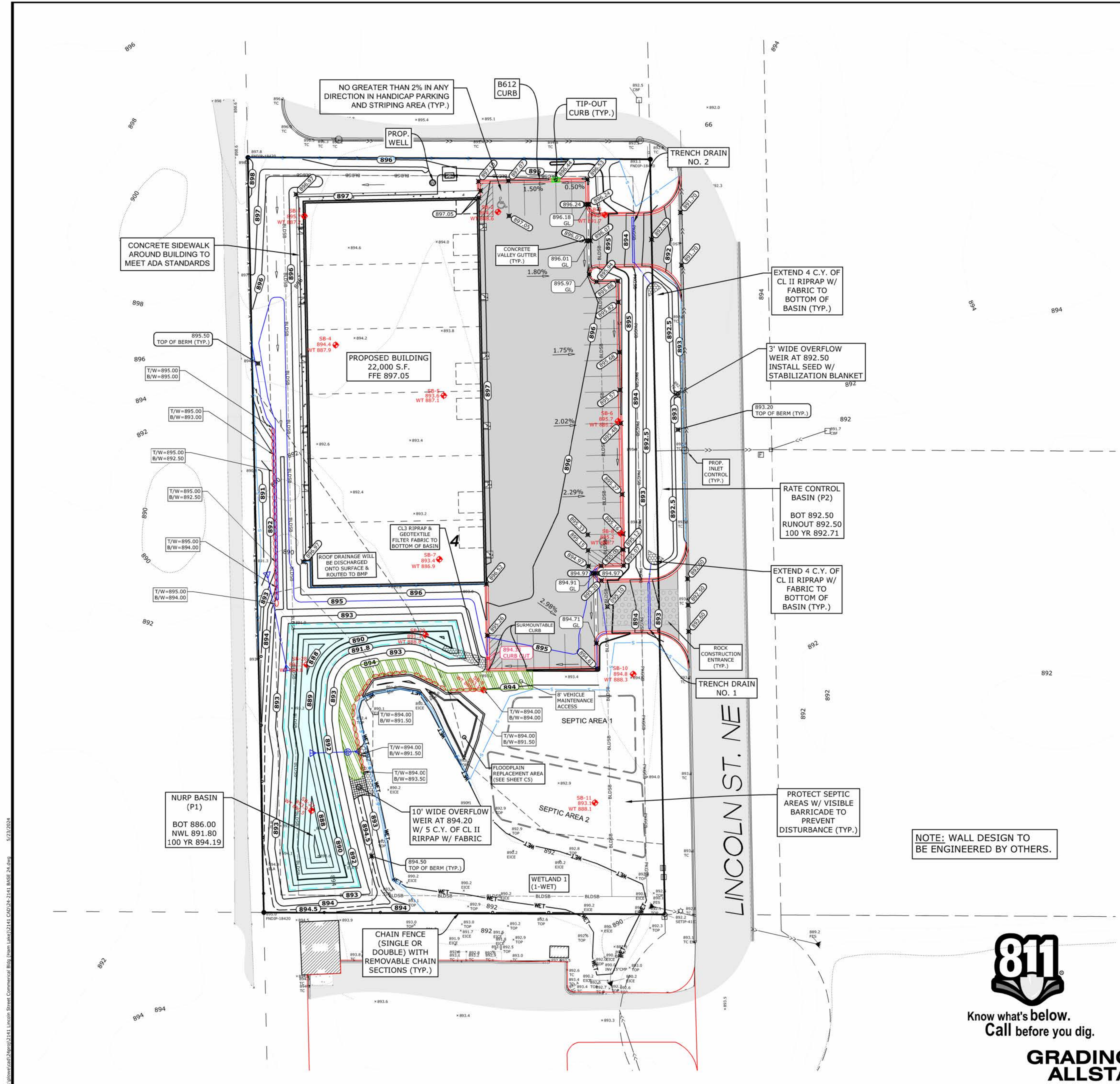


0 15 30
 1 INCH = 30 FEET

CO



below.
 Call before you dig.



SITE SEQUENCING

- PRIOR TO ANY GRADING OPERATIONS, THE CONTRACTOR SHALL INSTALL ROCK CONSTRUCTION ENTRANCE (LOCATIONS TO BE DETERMINED - COORDINATE WITH OWNER) AND PERIMETER SILT FENCE AS SHOWN ON PLAN. (CONTACT CITY TO INSPECT EROSION CONTROL MEASURES PRIOR TO GRADING OPERATIONS, IF NECESSARY.) ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE.
- THE CONTRACTOR SHALL PROVIDE ALL SOD, SEED, MULCH AND FERTILIZER WHICH SHALL CONFORM WITH THE FOLLOWING MNDOT SPECIFICATIONS AS MODIFIED BELOW.

ITEM	MNDOT SPECIFICATION/NOTES
SOD	3878
SEED **	3876
* FOR TURF ESTABLISHMENT	
COMMERCIAL TURF	MNDOT MIX 25-131 (220 LBS/ACRE)
RESIDENTIAL TURF	MNDOT MIX 25-131 (120 LBS/ACRE)
TEMPORARY	
FALL COVER	MNDOT MIX 21-112 (100 LBS/ACRE)
SPRING/SUMMER	MNDOT MIX 21-111 (100 LBS/ACRE)
SOIL-BUILDING COVER	MNDOT MIX 21-113 (110 LBS/ACRE)
1-2 YEARS COVER	MNDOT MIX 22-111 (30.5 LBS/ACRE)
2-5 YEARS COVER	MNDOT MIX 22-112 (40 LBS/ACRE)
MULCH	3882 (TYPE 1 - DISC ANCHORED)
FERTILIZER	3881
WOOD FIBER BLANKET	3885 (CATEGORY 2)

- * MOW A MINIMUM OF ONCE PER 2 WEEKS
- ** SEEDS ARE TO BE EITHER MULCHED OR COVERED BY FIBROUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION.
- ALL EXPOSED SOILS MUST HAVE TEMPORARY EROSION CONTROL PROTECTION OR PERMANENT COVER WITHIN SEVEN (7) DAYS.
- THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL ADJACENT PROPERTY LINES AND MAKE SURE THE EROSION CONTROL PRACTICES IN PLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES.
- THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION. SILT FENCE TO BE REMOVED ONLY AFTER COMPLETION OF BUILDING CONSTRUCTION AND UPON ESTABLISHMENT OF VEGETATION.
- THE CONTRACTOR SHALL PROVIDE WOOD FIBER BLANKET FOR ALL AREAS OF CONCENTRATED FLOW AND FOR ALL SLOPES 3:1 OR GREATER.
- PROTECT ALL STORM WATER MANAGEMENT FACILITIES FROM CONSTRUCTION RUN-OFF. CONTRACTOR TO INSTALL AND CONSTRUCT SAID FACILITIES ONCE SITE HAS BEEN STABILIZED.
- IF ANY SLOPES APPEAR TO BE FAILING, THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILT FENCE, BIOROLLS AND EROSION CONTROL BLANKET AS NEEDED.
- THE CONTRACTOR SHALL FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS.
- THE CONTRACTOR SHALL SOD ALL DISTURBED DRAINAGE AREAS, INCLUDING SWALES & OVERFLOWS.
- UPON GRADING COMPLETION THE CONTRACTOR SHALL PROVIDE NATIVE TOPSOIL WITH SOD OR SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN 48 HOURS OF FINAL GRADING.
- EXCESS SOIL SHOULD BE TREATED LIKE OTHER EXPOSED SOIL AND STABILIZED WITHIN 72 HOURS. ANY SOIL STOCKPILES ARE TO HAVE SILT FENCE PLACED ON DOWNSTREAM SIDES.
- IF A STREET, ALLEY, SIDEWALK OR OTHER PUBLIC PLACE SHOULD BECOME SOILED OR LITTERED, THE CONTRACTOR SHALL CAUSE SUCH SOILING OR LITTERING TO BE CLEANED UP BY SWEEPING NOT LATER THAN THE END OF THE WORKING DAY IN WHICH SUCH SOILING OR LITTERING SHALL HAVE OCCURRED OR BEEN OBSERVED.

OTHER POLLUTION CONTROL MEASURES

- CONSTRUCTION WASTE MATERIALS - ALL WASTE MATERIALS GENERATED AS A RESULT OF SITE CONSTRUCTION SHALL BE COLLECTED AND REMOVED ACCORDING TO ALL LOCAL AND/OR STATE WASTE MANAGEMENT REGULATIONS BY A LICENSED SOLID WASTE MANAGEMENT COMPANY. THE CONTRACTOR WILL ENSURE THAT ALL SITE PERSONNEL ARE INSTRUCTED IN THESE PRACTICES.
- HAZARDOUS WASTES - ALL HAZARDOUS WASTE MATERIALS SHALL BE STORED PROPERLY TO PREVENT SPILLS AND VANDALISM. WHEN NECESSARY, HAZARDOUS WASTES WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL AND/OR STATE REGULATION OR BY THE MANUFACTURER.
- SANITARY WASTE - ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS BY A LOCAL, LICENSED WATER MANAGEMENT COMPANY, AS REQUIRED BY LOCAL REGULATION.
- OFFSITE VEHICLE TRACKING - A ROCK CONSTRUCTION ENTRANCE HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. IF A STREET, ALLEY, SIDEWALK OR OTHER PUBLIC PLACE SHOULD BECOME SOILED OR LITTERED, THE CONTRACTOR SHALL CAUSE SUCH SOILING OR LITTERING TO BE CLEANED UP BY SWEEPING NOT LATER THAN THE END OF THE WORKING DAY IN WHICH SUCH SOILING OR LITTERING SHALL HAVE OCCURRED OR BEEN OBSERVED. DUMP TRUCKS HAULING LOOSE MATERIALS (SAND, TOPSOIL, ETC.) TO AND/OR FROM THE SITE SHALL BE COVERED WITH A TARPULLIN.
- VEHICLE CLEANING - NO ENGINE DEGREASING IS ALLOWED ON-SITE. EXTERNAL WASHING OF VEHICLES TO BE CONFINED TO A DEFINED AREA ("BONE YARD") ON-SITE. CONTRACTOR TO PROVIDE DESIGNATED TRUCK WASHOUT AREA WITH APPROPRIATE SIGNAGE. WASHOUT AREA IS TO BE A MINIMUM OF 50' FROM DITCHES, PONDS, OR OTHER STORMWATER FEATURES. ALL LIQUID AND SOLID WASTE GENERATED BY WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER (E.G. COMPACTED CLAY LINER, IMPERMEABLE GEO-MEMBRANE) AND DISPOSED OF PROPERLY.
- SPILL PREVENTION AND CONTROL - ALL VEHICLES WILL BE CHECKED FOR LEAKING OIL AND FLUIDS. VEHICLES LEAKING FLUIDS WILL NOT BE ALLOWED ON-SITE. SPILL KITS WILL BE STORED ON-SITE AND ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. SPENT ABSORBENT MATERIALS AND RAGS WILL BE HAULED OFF-SITE IMMEDIATELY AFTER THE SPILL IS CLEANED UP AND PROPERLY DISPOSED OF. SPILL PREVENTION AND CONTROL MEASURES SHALL BE IMPLEMENTED ONCE CONSTRUCTION BEGINS.
- SOIL STOCKPILES - INSTALL SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AROUND ALL TEMPORARY SOIL STOCKPILES. LOCATE SOIL OR DIRT STOCKPILES SUCH THAT DOWNSLOPE DRAINAGE LENGTH IS NO LESS THAN 8 M (25 FEET) FROM THE TOE OF THE PILE TO A SURFACE WATER, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER. IF REMAINING FOR MORE THAN 7 DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. DURING STREET REPAIR, COVER CONSTRUCTION SOIL OR DIRT STOCKPILES LOCATED CLOSER THAN 8 M (25 FEET) TO A ROADWAY OR DRAINAGE CHANNEL WITH TARPS, AND PROTECT STORM SEWER INLETS WITH SILT SOCKS OR STAKED SILT FENCE.
- PROVIDE WIMCO (OR APPROVED EQUAL) FOR INLET PROTECTION AT ALL EXISTING STORM SEWER INLETS THAT WILL RECEIVE RUN-OFF DURING CONSTRUCTION. INLET PROTECTION TO REMAIN IN-PLACE UNTIL AT LEAST 70% OF SITE VEGETATION HAS BEEN ESTABLISHED.
- CONTRACTOR TO PROVIDE DESIGNATED CONCRETE TRUCK WASHOUT AREA WITH APPROPRIATE SIGNAGE. KEEP WASHOUT AREAS AS FAR AS PRACTICAL FROM STORM DRAINS, DITCHES AND PONDS. DO NOT ALLOW RUN-OFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID AND SOLID WASTE. AFTER WASTE CONCRETE IS SET, BREAK-UP AND DISPOSE OF PROPERLY.
- THE CONTRACTOR MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. THE CONTRACTOR MAY DISCHARGE FROM THE TEMPORARY OR PERMANENT SEDIMENTATION BASINS TO SURFACE WATERS IF THE BASIN WATER HAS BEEN VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED IN THE BASIN AND THAT NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMPs, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM PROPERTIES.

DRAWN BY: M.Q.A. DESIGN BY: Q.M.A.
 CHCKD BY: M.Q.A. PROJ. NO. 24-2141
 ORIGINAL DATE: MAY 3, 2024

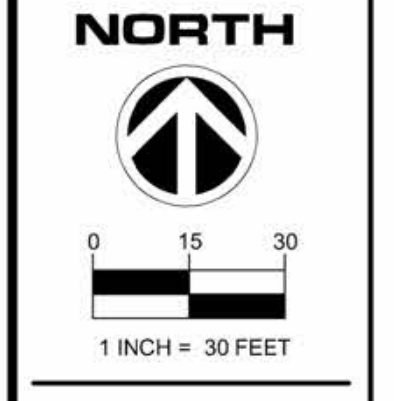
DATE	REVISION DESCRIPTION
5/23/24	REVISED BASIN GRADING

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
QASEM M. ABUGHAZLEH LIC. NO. 56289
 DATE: 05.23.2024

ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING
 HAM LAKE, MINNESOTA
 GRADING, DRAINAGE, AND EROSION CONTROL PLAN

PREPARED FOR:
GLEN HARSTAD

PLOWE ENGINEERING, INC.
 6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701



C1



**GRADING, DRAINAGE, AND EROSION CONTROL PLAN
 ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING**

S:\show\cadd\24000\24-2141 Commercial Bldg (Ham Lake)\24-2141 CAD\24-2141_BASIS_24.dwg 5/23/2024

DATE	REVISION DESCRIPTION
5/23/24	REVISED UTILITIES

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
QASEM M. ABUGHAZLEH LIC. NO. 56299
 DATE: 05.23.2024

STORM SEWER NOTES

FIELD VERIFY SIZE, ELEVATION, AND LOCATION OF EXISTING STORM SEWER AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY INSTALLATIONS.

STORM SEWER PIPE SHALL BE PVC SCHEDULE 40 MEETING ASTM D1785, D2665, F891, OR F1488 WITH APPROVED FITTINGS (SEE TABLE 701.2). SOLVENT WELDED JOINTS MUST USE ASTM F656 PURPLE PRIMER AND ASTM D2564 CEMENT. THE SEWER MUST BE INSTALLED BY OPEN-TRENCH ON A CONTINUOUS GRANULAR BED PER SECTION 314.4.1. ASTM D2241 PVC IS NOT AN APPROVED MATERIAL FOR BUILDING SEWERS.

STORM SEWER LENGTHS INCLUDE THE LAYING LENGTH OF THE FLARED-END SECTION. LAYING LENGTH OF APRON TO BE DEDUCTED FROM PAYMENT LENGTH OF PIPE.

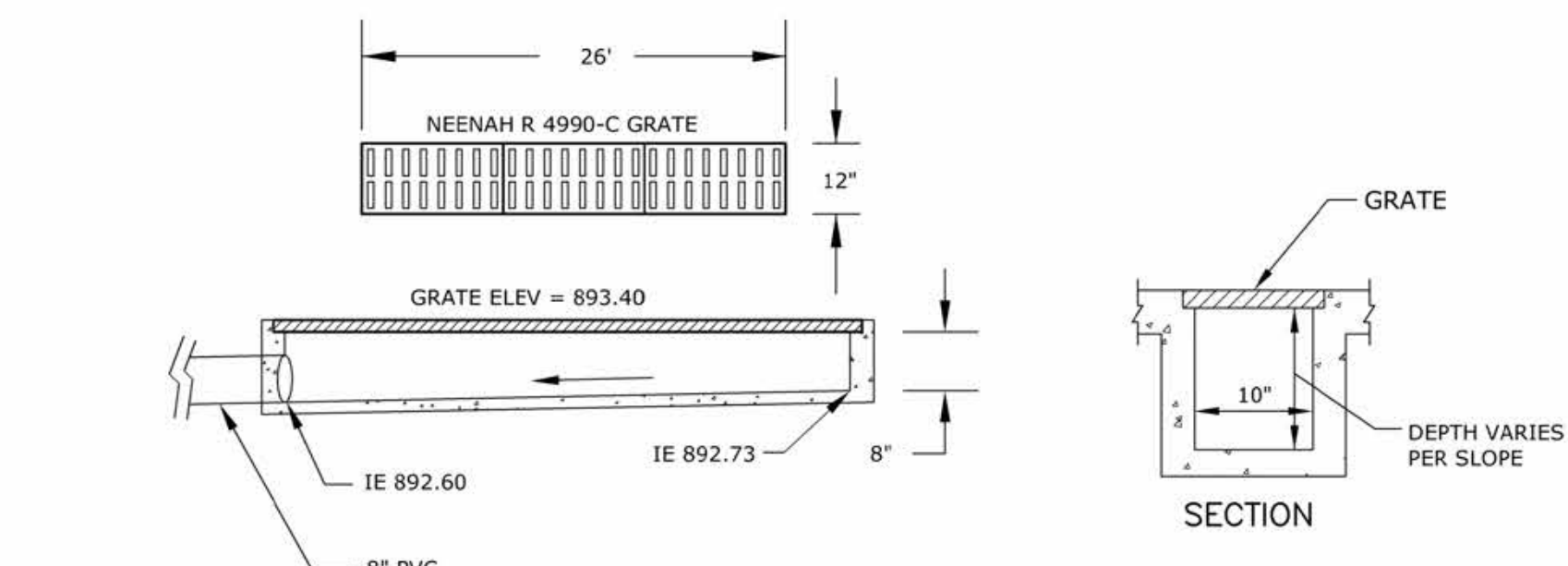
ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MINNESOTA RULES, PART 4715.2820.

STORM SEWER PIPES TO BE JOINED TO THE CATCH BASIN MANHOLES W/ APPROVED RESILIENT RUBBER JOINTS TO MAKE THEM GASTIGHT OR WATERTIGHT. CEMENT MORTAR JOINTS ARE PERMITTED ONLY FOR REPAIRS AND CONNECTIONS OF EXISTING LINES CONSTRUCTED WITH SUCH JOINTS.

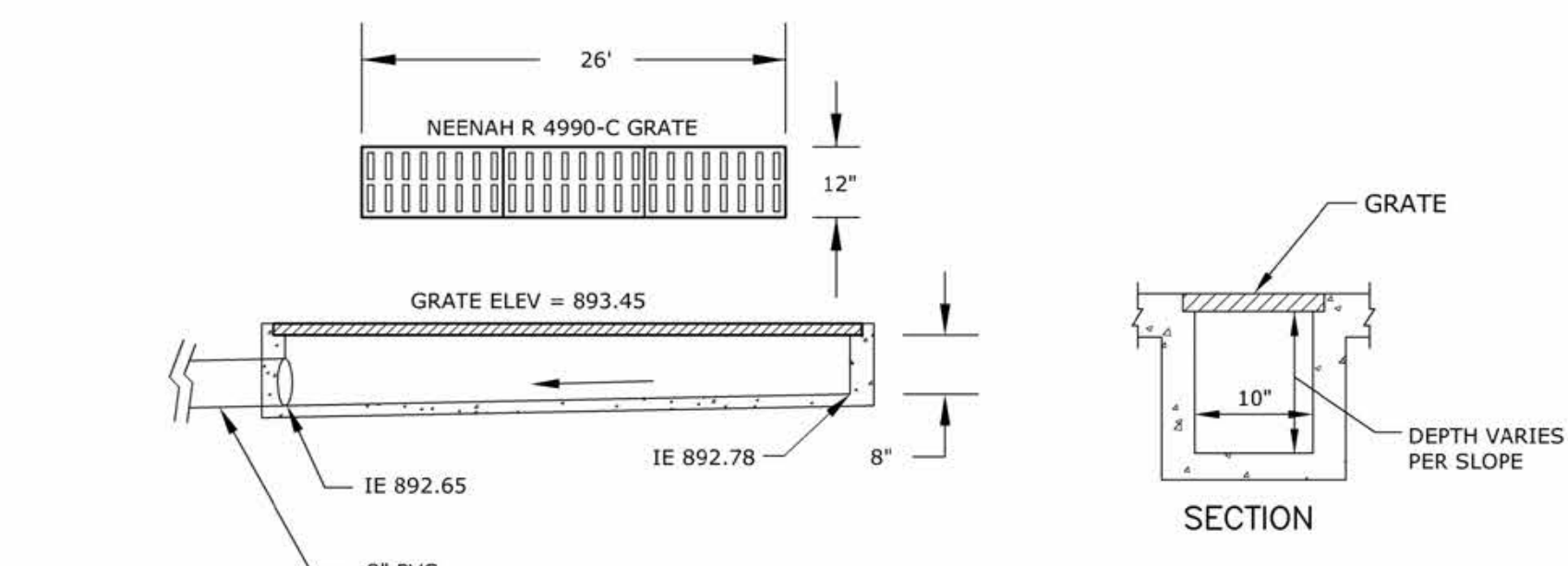
ALL PERMITS, INCLUDING BUT NOT LIMITED TO PERMITS FROM CITY OF HAM LAKE, COON CREEK WATERSHED, AND THE MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY, SHALL BE OBTAINED PRIOR TO ORDERING OF MATERIAL AND STARTING OF CONSTRUCTION. NO INSTALLATION OF UTILITIES SHALL BE PERMITTED UNTIL ALL APPLICABLE PERMITS ARE RECEIVED BY THE CONTRACTOR.

INSTALLATION OF UTILITIES SHALL BE CONSTRUCTED TO MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY STANDARDS AND CITY STANDARDS AS IDENTIFIED IN THE PUBLIC WORKS/ENGINEERING STANDARDS.

SEPTIC SYSTEM & CONNECTION TO WELL DESIGN BY OTHERS. SEE DESIGNER'S DESIGN AND NOTES FOR ADDITIONAL DETAILS.



1 TRENCH DRAIN NO. 1
N.T.S.



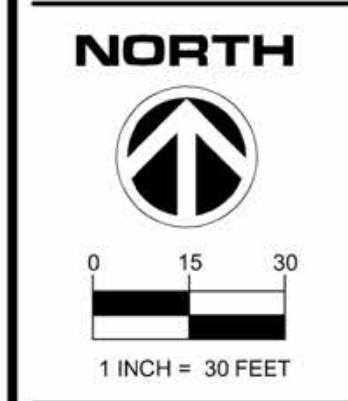
1 TRENCH DRAIN NO. 2
N.T.S.



ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING
 HAM LAKE, MINNESOTA
 UTILITY PLAN

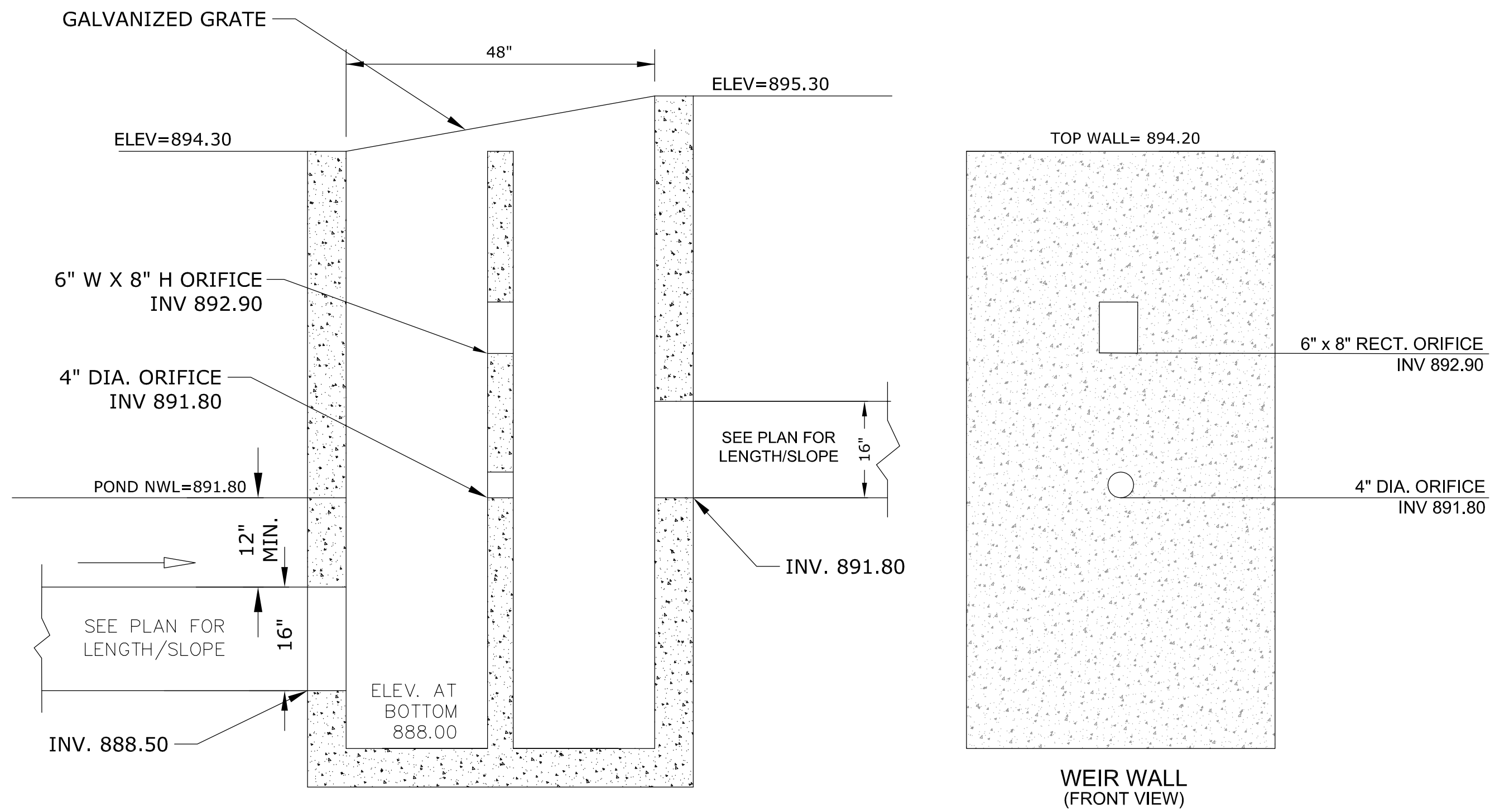
PREPARED FOR:
GLEN HARSTAD

PLOWE ENGINEERING, INC.
 SITE PLANNING & ENGINEERING
 6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

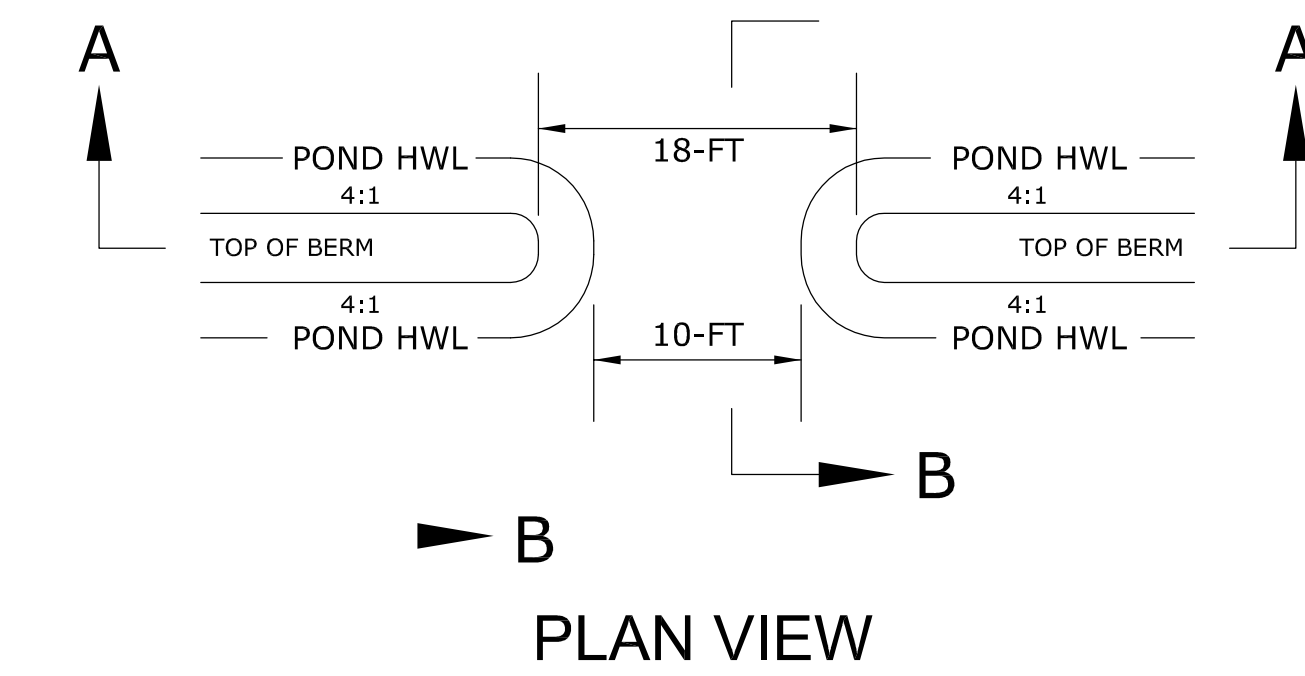


C2

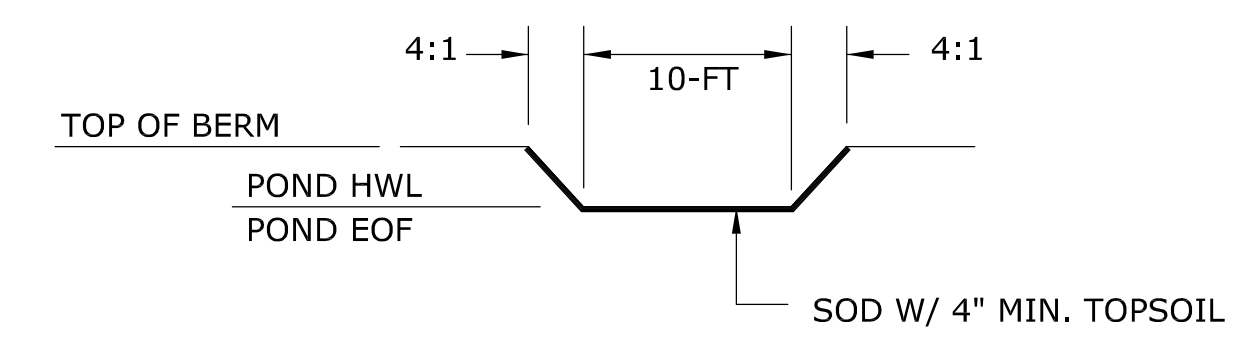
S:\plowecad\24000\24141 Lincoln Street Commercial Bldg (Ham Lake)\24141_CDD\24-2141_BASE.dwg 5/23/2024



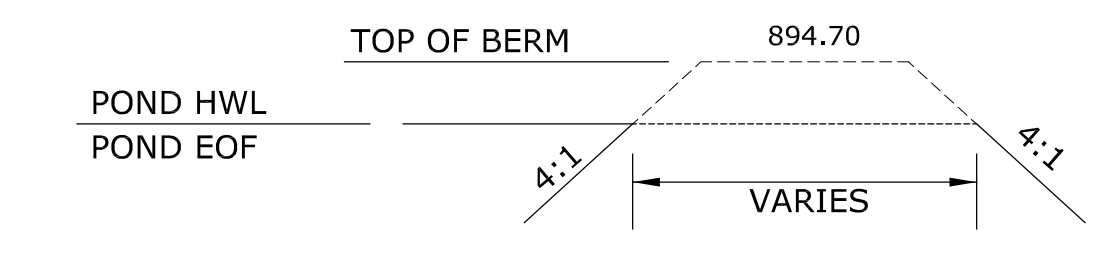
POND 1 OUTLET STRUCTURE (OCS A)
N.T.S.



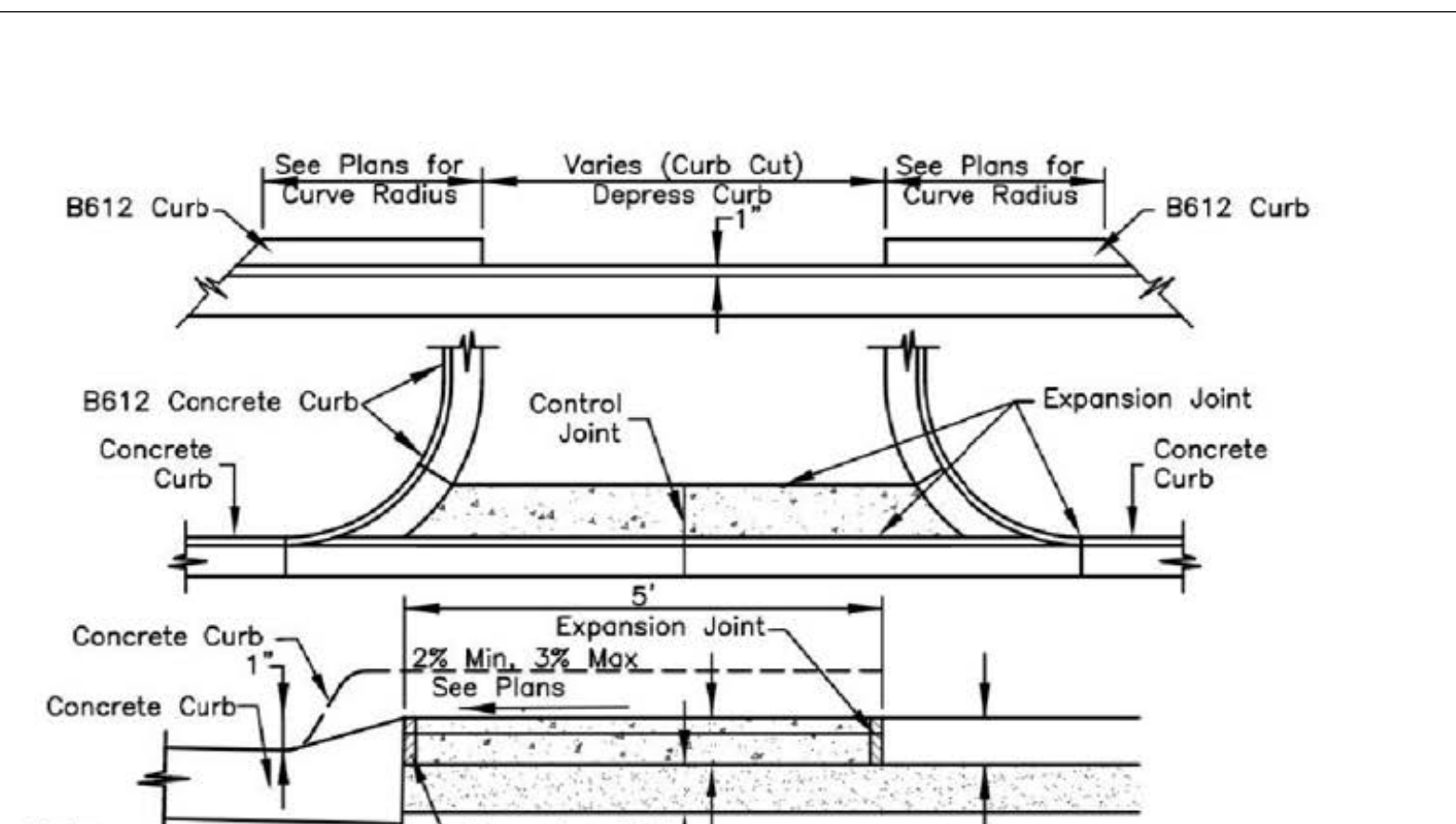
SODDED OVERFLOW - POND 1 (P1)
N.T.S.



SECTION A - A

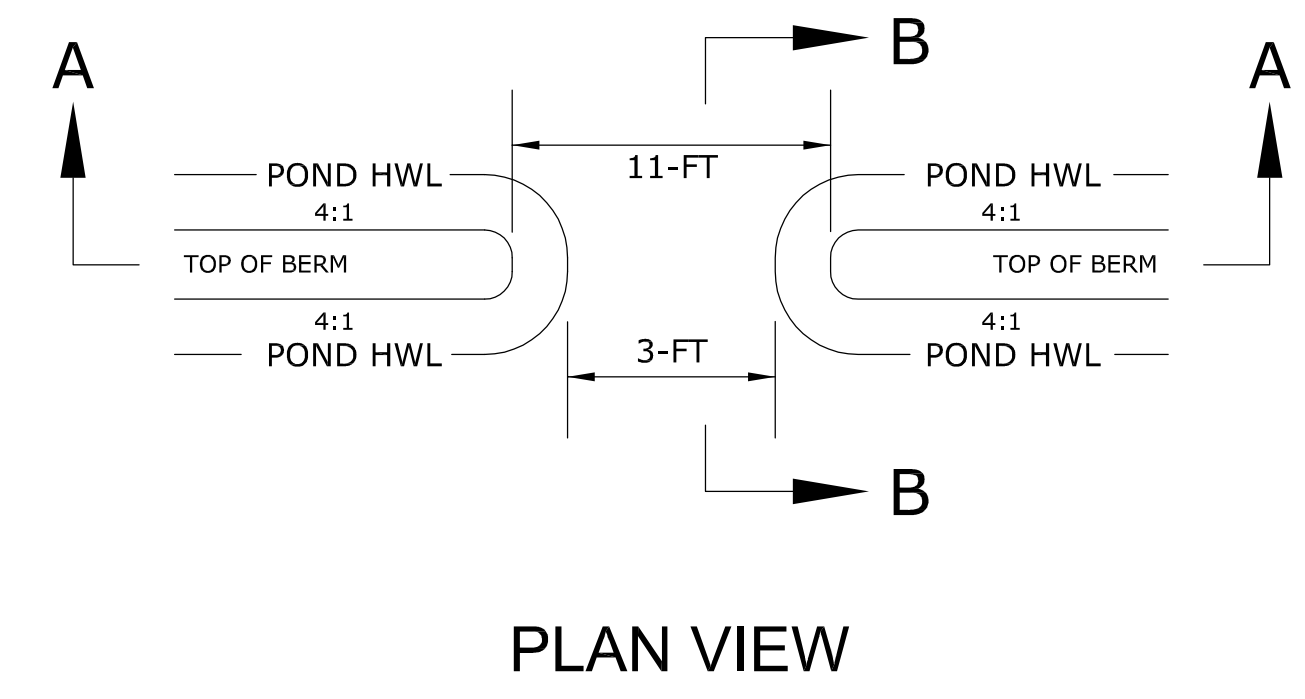


SECTION B - B

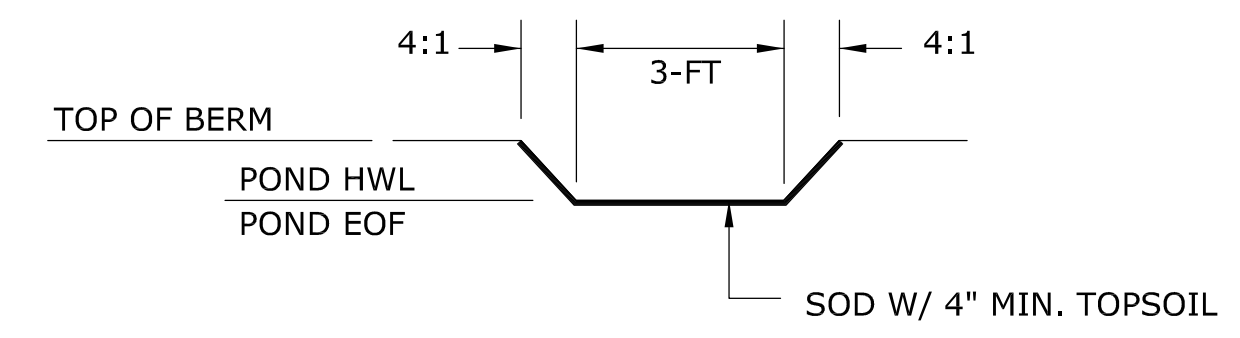


- Note:**
- Match existing driveway width and elevation at matchline unless otherwise directed by engineer (See Plans).
 - If existing driveway is concrete, apron and driveway shall be constructed of 6" concrete with 6"x6"-6/6 welded wire fabric per MnDOT Spec. 3303 in flat sheets, rot rolls. Epoxy coated dowel bars conforming to MnDOT Spec. 3302 shall be placed in the existing driveway pavement along the sawcut line. Dowel bars shall be properly coated with a MnDOT approved lubricant. Dowel bars shall be #13, and placed at 24" OC spacing. All work shall conform to MnDOT Spec. 2301 and 2531. Concrete shall be per MnDOT Spec. 2461 for ready-mix with 3,900 PSI at 28 days, with air content of 5% to 7%. Coarse aggregate for concrete shall be per MnDOT Spec. 3137 with 1" max, Class A aggregate. Joint sealer shall be hot-poured, low modulus, mastic type per MnDOT Spec. 3725. Membrane curing compound shall be per MnDOT Spec. 3754 and 2301.3J.
 - If existing driveway is gravel, apron and driveway within R/W shall be constructed per bituminous driveways.
 - Type SP 9.5 Bituminous Wear Course (SPWEA240C), 1" Thick MnDOT Spec. 2360.
 - Type SP 12.5 Bituminous Wear Course (SPWEB240C), 2" Thick MnDOT Spec. 2360.
 - 6" Reinforced Concrete Slab, MnDOT Spec. 2301 and 2531.
 - 6" Aggregate Base Class 5, MnDOT Spec. 2211.
- Gravel driveways matching beyond R/W shall be 6" Class 5.
- If existing driveway is bituminous, apron shall be constructed per concrete driveway and driveway behind apron shall be bituminous per note A. All bituminous work shall conform to MnDOT Specifications 2112, 2211, 2357 and 2360. Tack coat is to be applied between bituminous courses and between concrete and bituminous surfaces.
 - Driveways in cut sections to slope up from 1" curb lip to R/W at 2% min, 3% max then slope to matchline. Driveways in fill sections to slope up from 1" curb lip to R/W at min of 2% then slope to matchline. See Plan for slope.

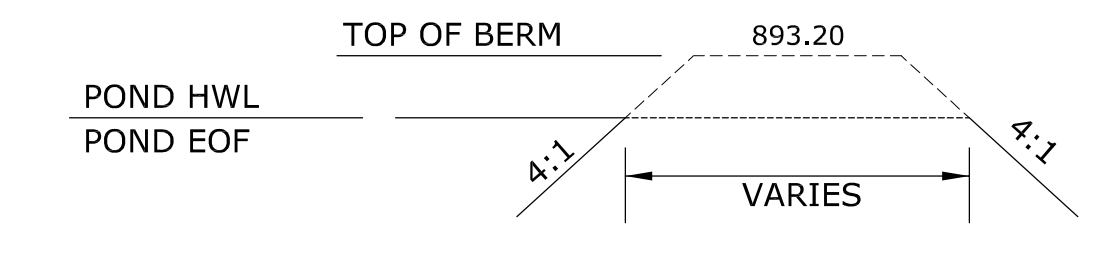
COMMERCIAL DRIVEWAY DETAIL HL-370A1
NOT TO SCALE



SODDED OVERFLOW - RATE CONTROL BASIN (P2)
N.T.S.



SECTION A - A



SECTION B - B

DRAWN BY: M.Q.A.	DESIGN BY: Q.M.A.
CHKD BY: M.Q.A.	PROJ. NO. 24-2141
ORIGINAL DATE: MAY 3, 2024	

DATE	REVISION DESCRIPTION
5/23/24	REVISED OCS & OVERFLOW DETAILS

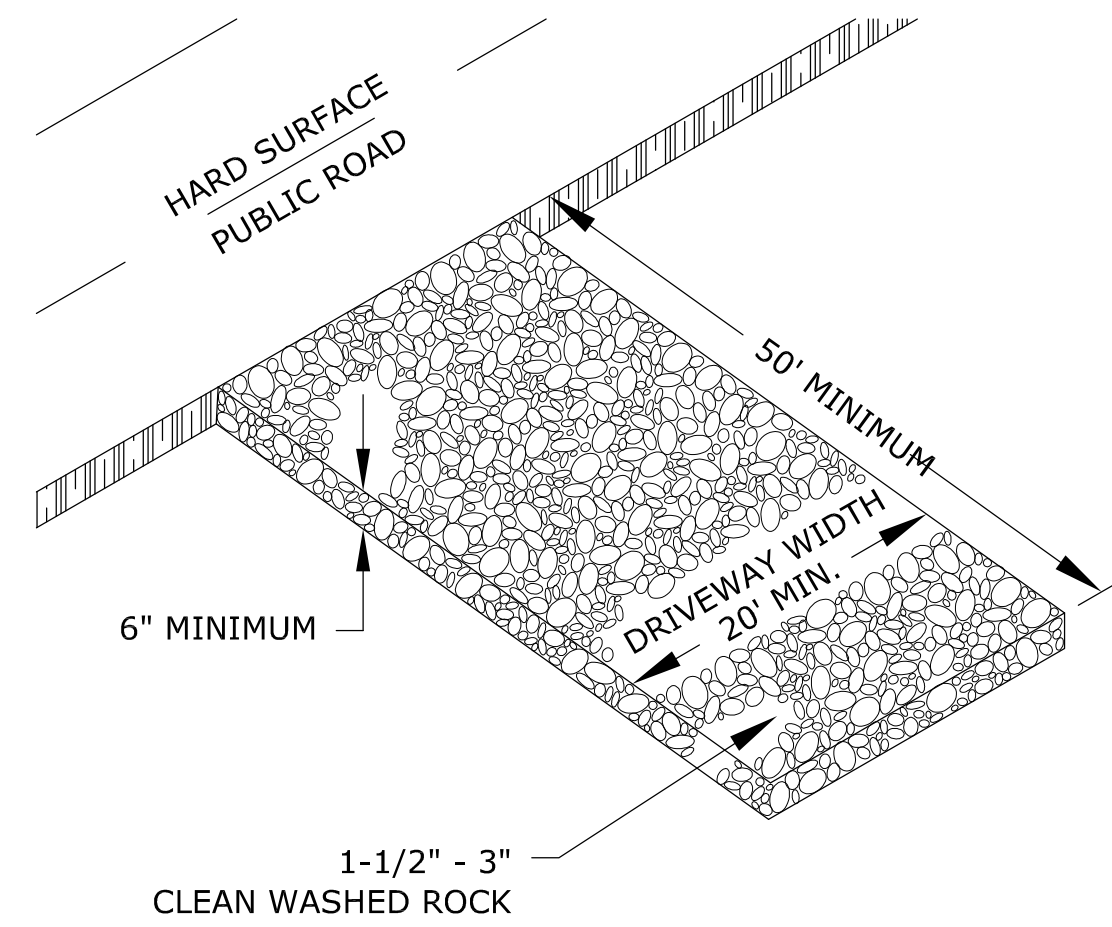
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

QASEM M. ABUGHAZLEH
LIC. NO. 56299
DATE: 05.23.2024

ALLSTATE DISTRIBUTIONS
COMMERCIAL BUILDING
HAM LAKE, MINNESOTA

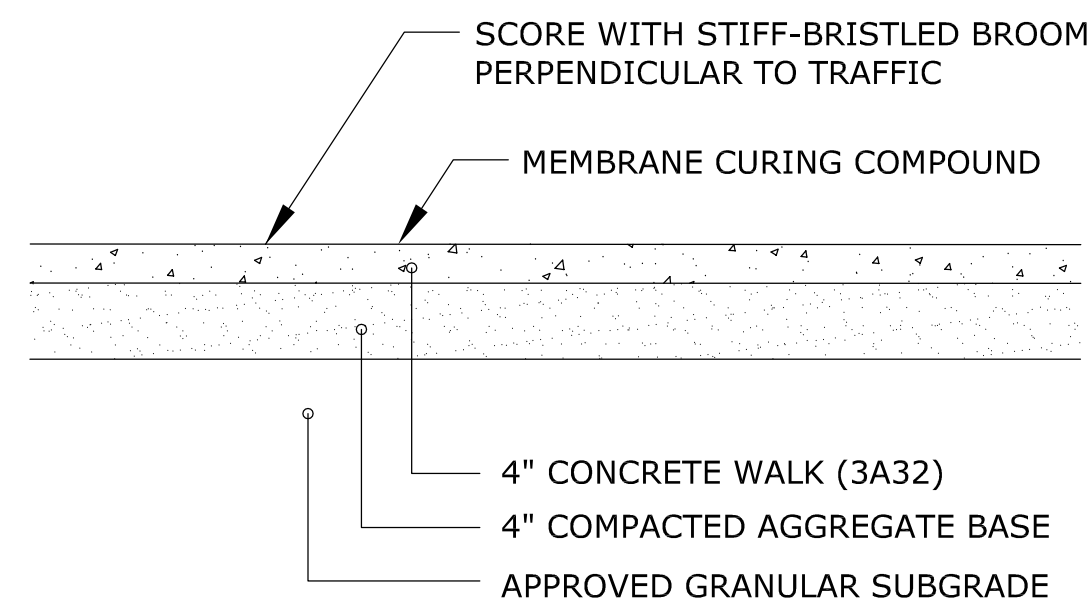
PREPARED FOR:
GLEN HARSTAD

PLOWE ENGINEERING, INC.
SITE PLANNING & ENGINEERING
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701



ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE

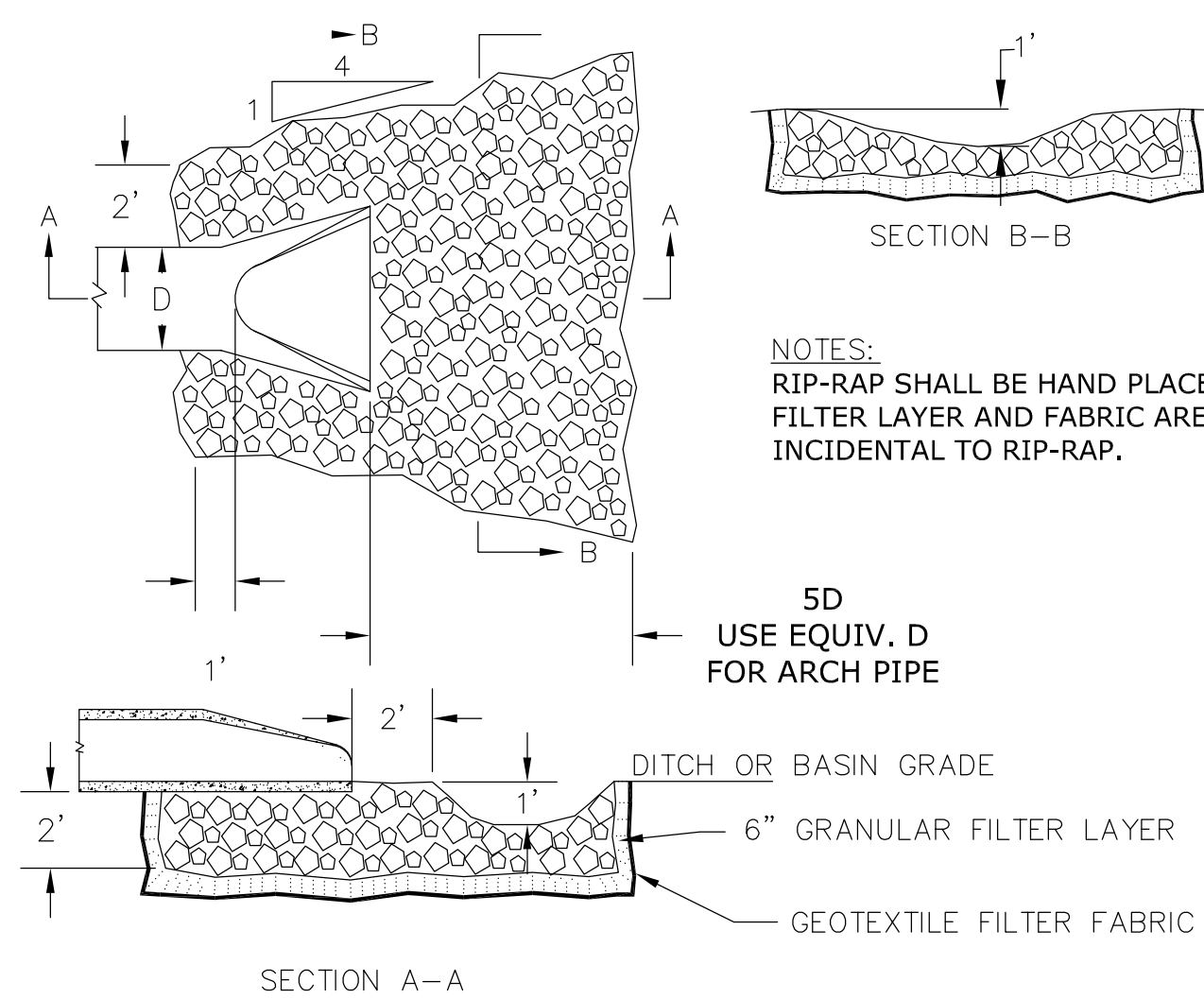


NOTES:

- 1) USE EXPANSION JOINT WHERE NEW CONCRETE MEETS EXISTING CONCRETE OR STRUCTURE.
- 2) CONTROL JOINTS SHALL BE CUT WITH A JOINTER HAVING A RADIUS OF 1/4" AND SPACED @ 5'-0" O.C. MAX. U.N.O.
- 3) EXPANSION JOINTS SHALL BE SPACED AT 20'-0" O.C. MAX. AND SHALL CONSIST OF A 1/2" PRE-FORMED JOINT FILLER.
- 4) ANTI-SPALLING COMPOUND SHALL BE APPLIED TO CONCRETE SURFACES.

TYPICAL CONCRETE SIDEWALK

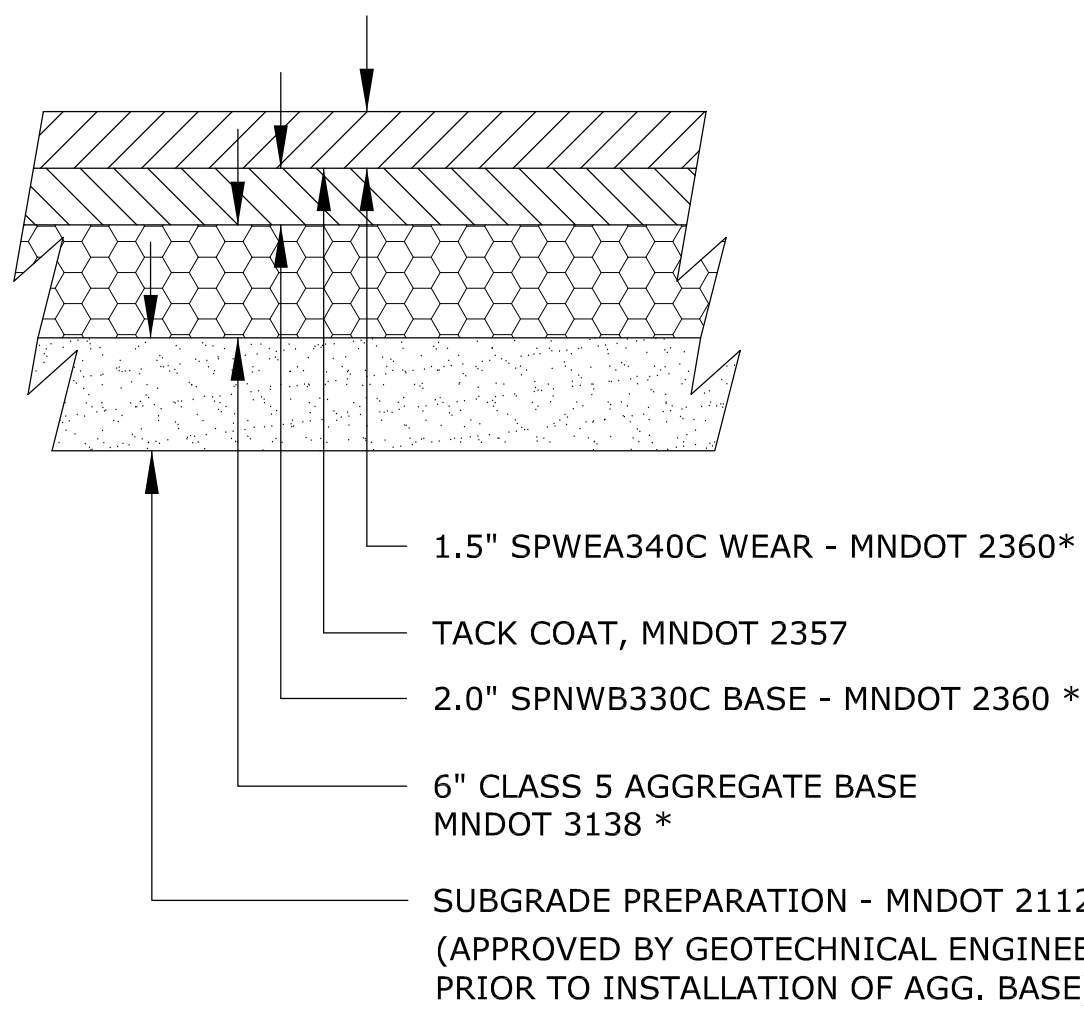
NOT TO SCALE



RIP-RAP QUANTITIES (C.Y.)					
PIPE DIA.	RIP-RAP	PIPE DIA.	RIP-RAP	PIPE DIA.	RIP-RAP
12"	4	24"	10	42"	23
15"	5	27"	12	48"	29
18"	6	30"	14	54"	34
21"	8	36"	19	60"	39

RIP-RAP AT OUTLETS

NOT TO SCALE

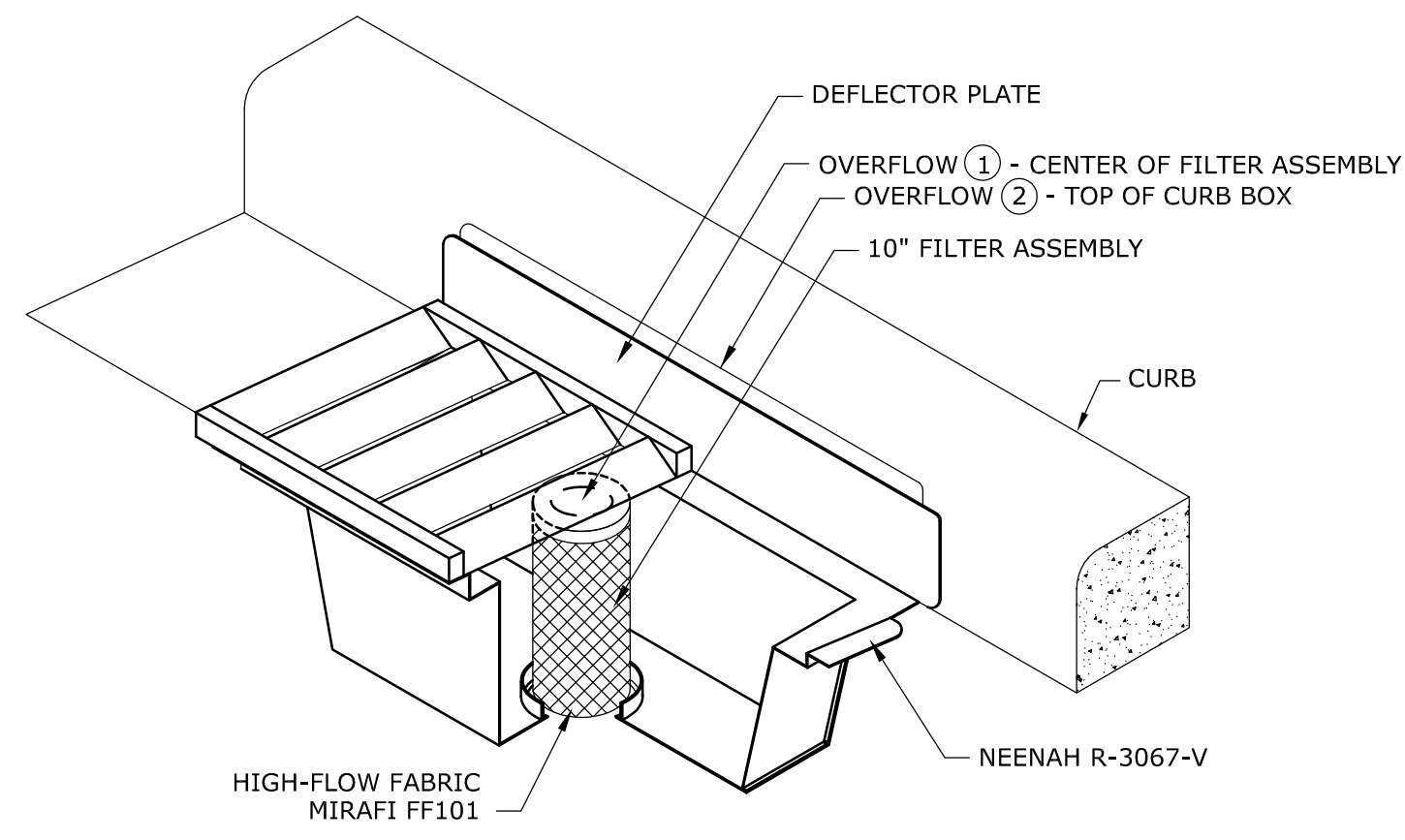


PAVING SHALL CONFORM TO THE LATEST EDITION OF MNDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE CITY'S STANDARDS FOR STREET AND UTILITY CONSTRUCTION.

* PAVING SECTION SHALL BE REVIEWED AND APPROVED BY HAUGO GEOTECHNICAL SERVICES OR ANOTHER GEOTECHNICAL ENGINEER PRIOR TO ANY INSTALLATIONS.

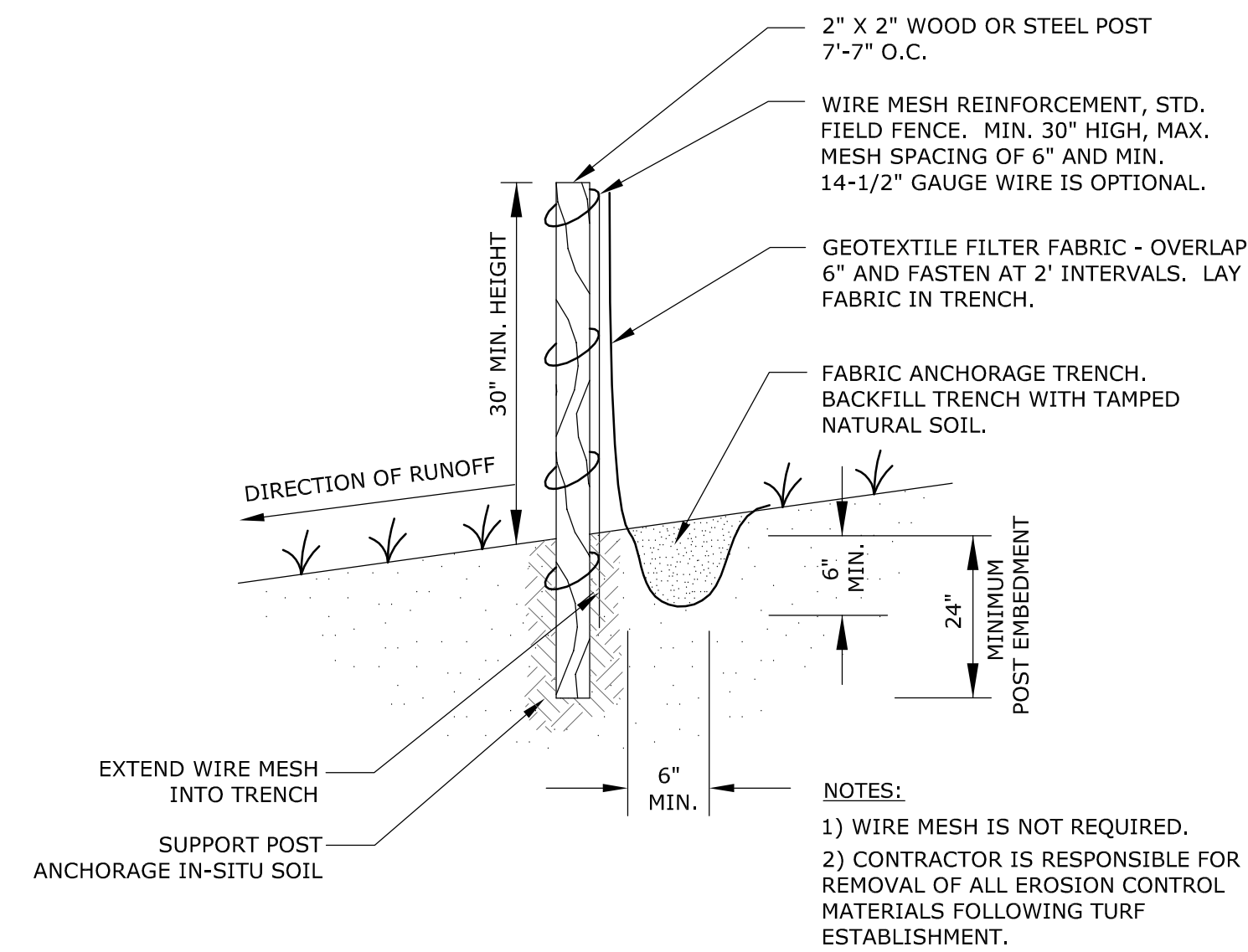
BITUMINOUS PAVEMENT

NOT TO SCALE



WIMCO INLET PROTECTION

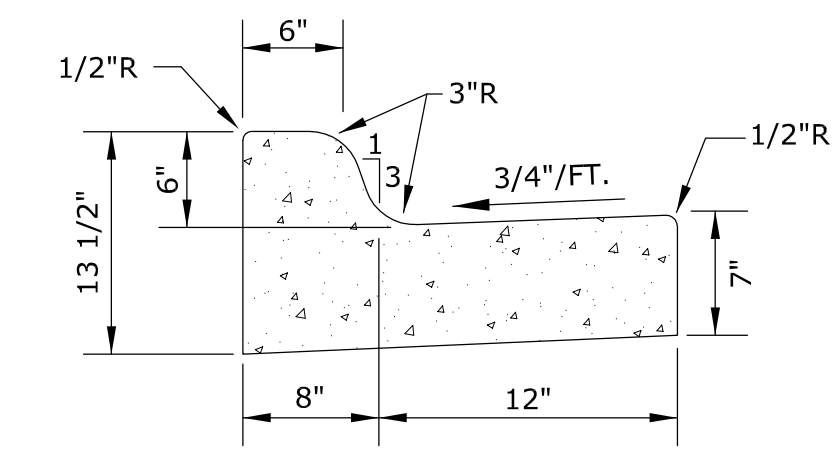
NOT TO SCALE



SILT FENCE

NOT TO SCALE

PROVIDE 4" CLASS 5 UNDER CURB (TYP)

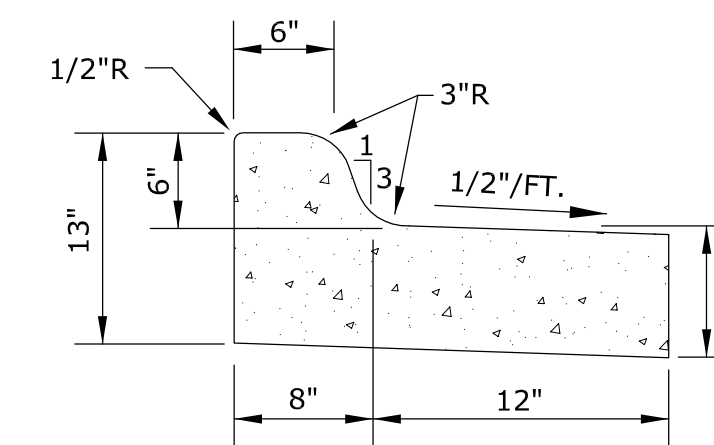


NOTE: FOR MECHANICALLY LAID CURB, SHOE MAY BE TILTED.

B612 CONCRETE CURB & GUTTER

NOT TO SCALE

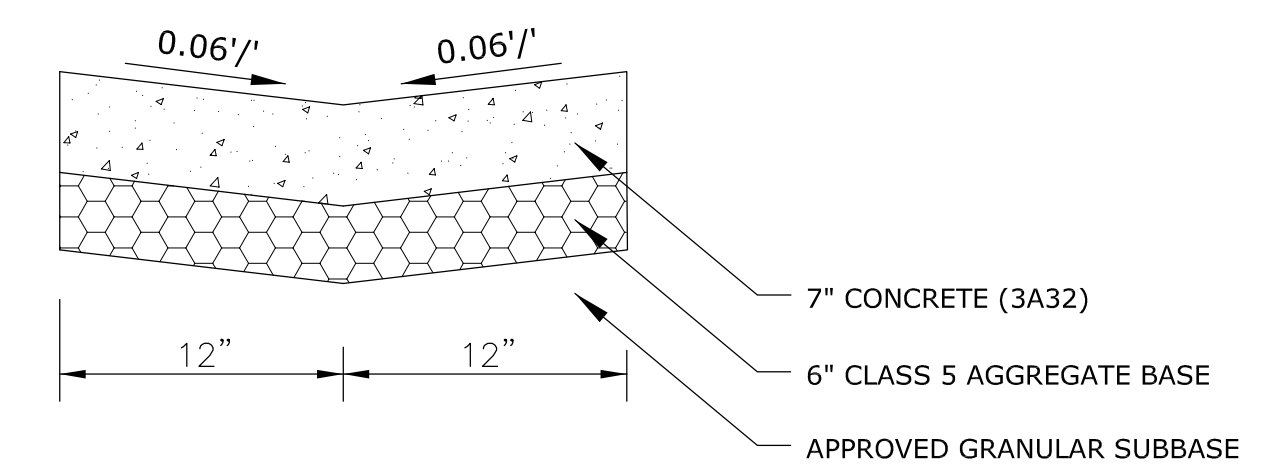
PROVIDE 4" CLASS 5 UNDER CURB (TYP)



NOTE: FOR MECHANICALLY LAID CURB, SHOE MAY BE TILTED.

B612 CONCRETE CURB & GUTTER (TIP-OUT)

NOT TO SCALE



CONCRETE GUTTER SWALE

NOT TO SCALE

DRAWN BY: M.Q.A.	DESIGN BY: Q.M.A.
CHKD BY: M.Q.A.	PROJ. NO. 24-2141
ORIGINAL DATE: MAY 3, 2024	

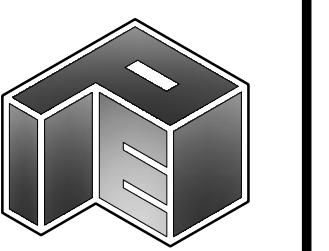
DATE	REVISION DESCRIPTION

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Q. M. A.
GASEM M. ABUGHAZLEEN
LIC. NO. 56289
DATE: 05.23.2024

ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING
HAM LAKE, MINNESOTA

PREPARED FOR:
GLEN HARSTAD



SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.

6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701

LEGEND

PROPOSED SOIL AMENDMENT AREAS

SOIL AMENDMENT AREAS (DISTURBED AREAS ONLY)

- ON-SITE TOPSOIL TO BE STOCKPILE
- AFTER GRADING, LEAVE AMENDMENT AREAS SUBCUT 8"
- ALLEVIATE COMPACTED SOILS (PLOW OR TILL) TO A MIN. DEPTH OF 2"
- APPLY 8" OF STOCKPILED TOPSOIL
- APPLY 2.5" COMPOST MEETING:
 - 8-13% SOIL ORGANIC MATTER
 - PH SUITABLE FOR TURF SEEDING
 - NOTE: RETAIN RECORDS & RECEIPTS FOR COMPOST DELIVERED TO SITE FOR RCWD INSPECTIONS
- ROTOTILL COMPOST INTO TOPSOIL TO A MIN. DEPTH OF 8" BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER OR SUBSOILER

DATE	REVISION DESCRIPTION
5/23/24	REVISED SOIL AMENDMENT AREA

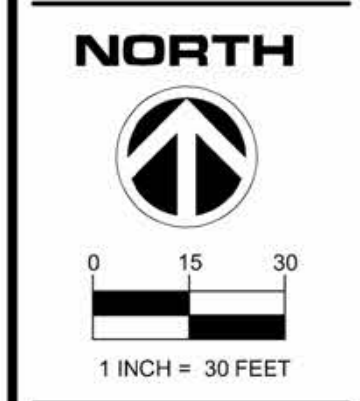
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

QASEM M. ABUGHAZLEH
 LICENSE NO. 56289
 DATE: 05.23.2024

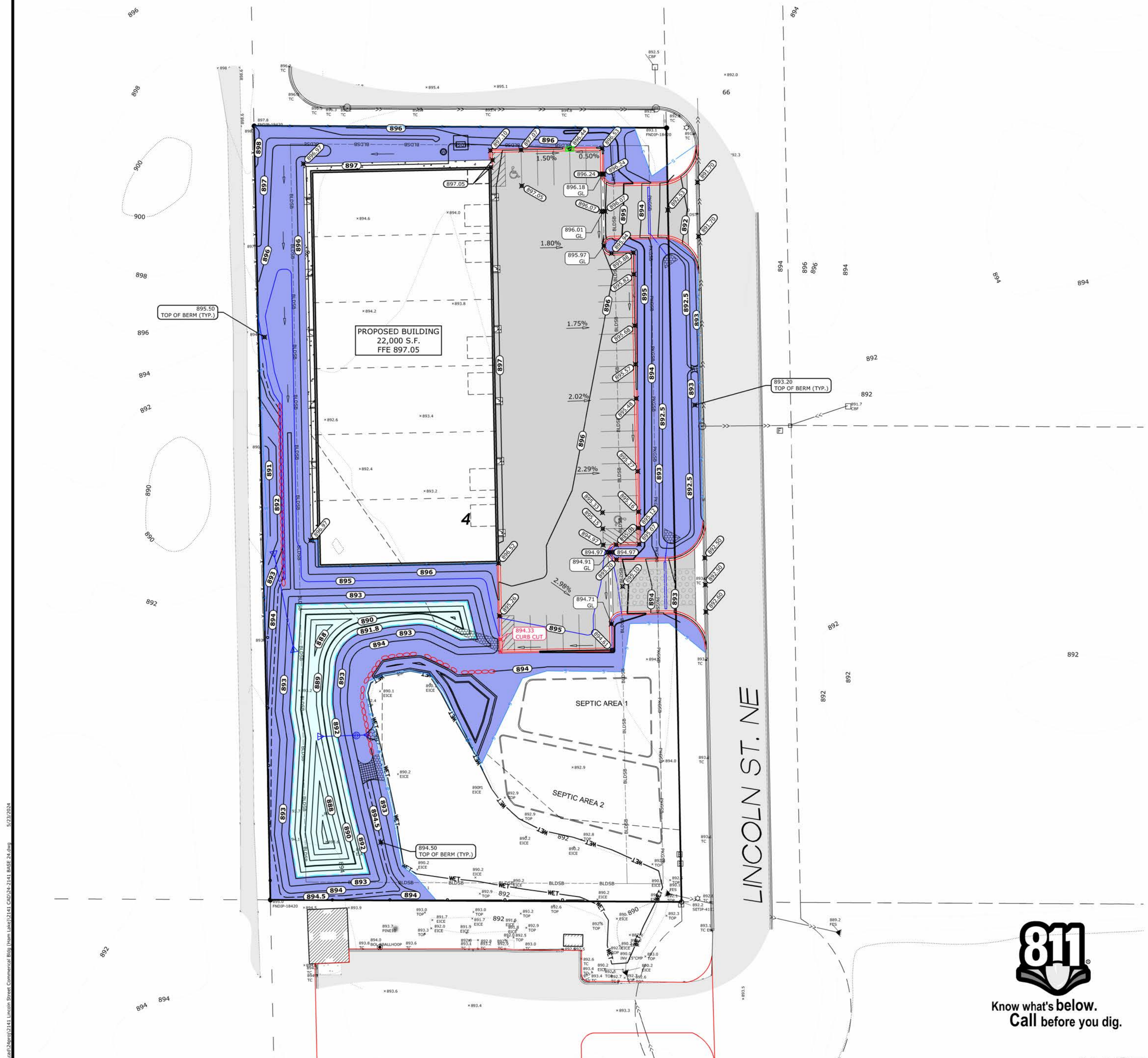
**ALLSTATE DISTRIBUTIONS
 COMMERCIAL BUILDING**
 HAM LAKE, MINNESOTA
 SOIL AMENDMENT PLAN

PREPARED FOR:
 GLEN HARSTAD

**PLOWE
 ENGINEERING, INC.**
 SITE PLANNING & ENGINEERING
 6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701



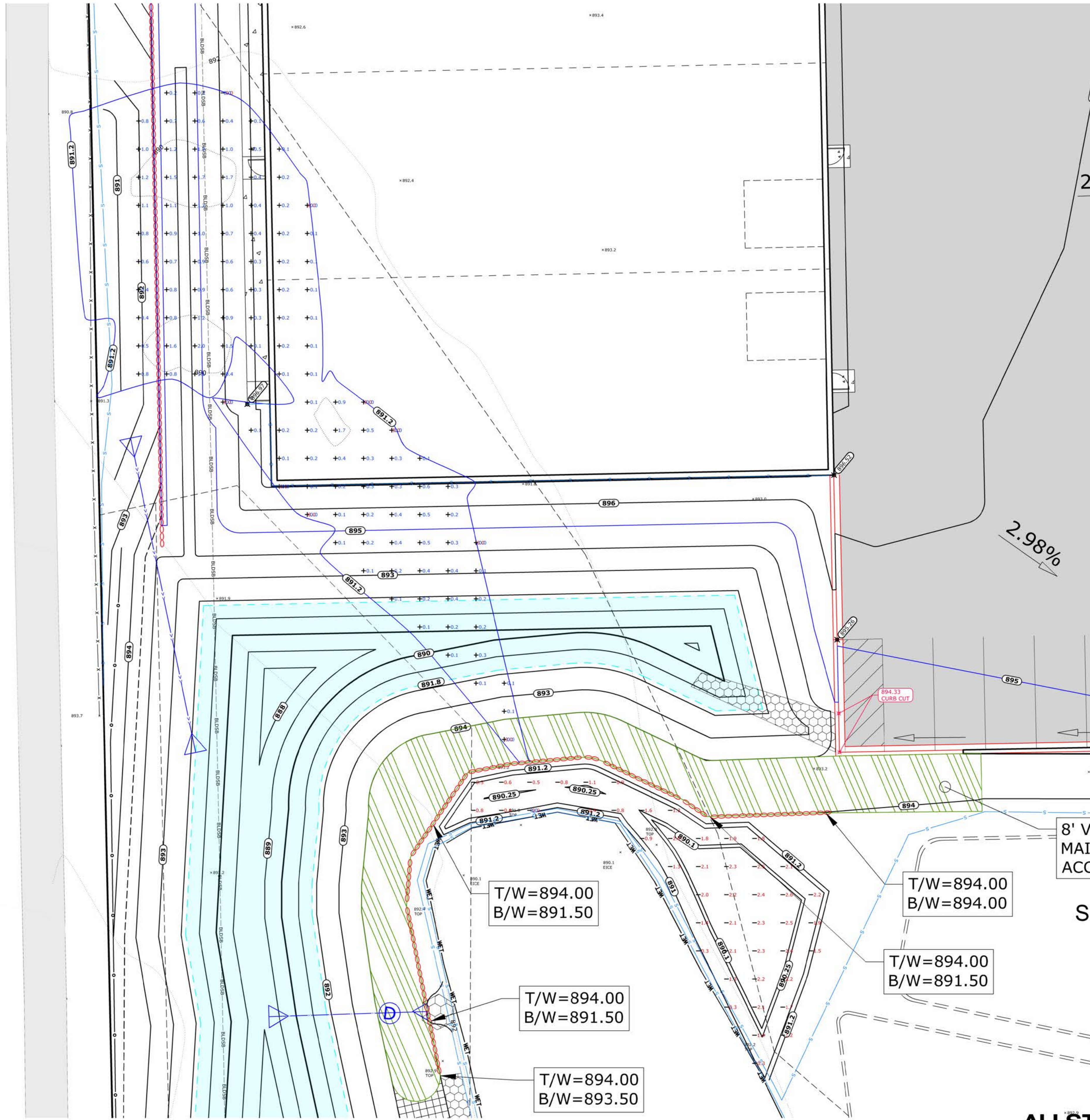
C4



Know what's below.
 Call before you dig.

SOIL AMENDMENT PLAN ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING

S:\p\lowe\cadd\2400012141_Lincoln Street Commercial Bldg (Ham Lake)\2141_CDD\24-2141_BASE_24.dwg 5/23/2024



FLOODPLAIN = FROM 890.10 (NWL) TO 891.20 (FLOODPLAIN LEVEL)

FLOODPLAIN FILL = 52.64 C.Y *

FLOODPLAIN REPLACEMENT = 66.09 C.Y.

TOTAL = 13.45 YD3 (NET CUT)

* FOR CONSERVATIVE PURPOSES, THE FILL DENOTED HERE ALSO INCLUDES THE VOLUME BELOW 890.10 FROM THE BOTTOM OF THE EXISTING THREE WETLANDS (TO BE FILLED IN) UP TO THE 891.20 FLOODPLAIN LEVEL.

DRAWN BY: M.Q.A. DESIGN BY: Q.M.A.
 CHCKD BY: M.Q.A. PROJ. NO. 24-2141
 ORIGINAL DATE: MAY 3, 2024

DATE	REVISION DESCRIPTION
5/23/24	REVISED FLOODPLAIN REPLACEMENT AREA

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

QASEM M. ABUGHAZLEH
 LICENSE NO. 56289
 DATE: 05.23.2024

ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING
 HAM LAKE, MINNESOTA
 FLOODPLAIN EXHIBIT

PREPARED FOR:
 GLEN HARSTAD

PLOWE ENGINEERING, INC.
 SITE PLANNING & ENGINEERING
 6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701



Know what's below.
 Call before you dig.

FLOODPLAIN EXHIBIT ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING

C5

S:\plow\cad\24\proj\24141 Lincoln Street Commercial Bldg (Ham Lake)\24141_CDD\24-2141_BASE_24.dwg 5/23/2024

4.1 TERMINATION OF COVERAGE. [MINN. R. 7090]
 4.2 PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER ALL TERMINATION CONDITIONS LISTED IN SECTION 13 ARE COMPLETE. EROSION PREVENTION, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENT BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. PERMITTEES MAY DEWATER TO SURFACE WATERS IF THEY VISUALLY CHECK TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF PERMITTEES CANNOT DISCHARGE THE WATER TO A SEDIMENTATION BASIN PRIOR TO ENTERING A SURFACE WATER, PERMITTEES MUST TREAT IT WITH APPROPRIATE BMPs SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE SURFACE WATER OR DOWNSTREAM PROPERTIES. [MINN. R. 7050.0210]
 10.3 IF PERMITTEES MUST DISCHARGE WATER CONTAINING OIL OR GREASE, THEY MUST USE AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE (E.G., CARTRIDGE FILTERS, ABSORBENTS PADS) PRIOR TO DISCHARGE. [MINN. R. 7090]
 10.4 PERMITTEES MUST DISCHARGE ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES IN A MANNER THAT DOES NOT CAUSE EROSION OR SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS OR INUNDATION OF WETLANDS IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS THAT CAUSES SIGNIFICANT ADVERSE IMPACT TO THE WETLAND. [MINN. R. 7090]
 10.5 IF PERMITTEES USE FILTERS WITH BACKWASH WATER, THEY MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. [MINN. R. 7090]

11.1 INSPECTIONS AND MAINTENANCE. [MINN. R. 7090]
 11.2 PERMITTEES MUST ENSURE A TRAINED PERSON, AS IDENTIFIED IN ITEM 21.2.B, WILL INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 1/2 INCH IN 24 HOURS. [MINN. R. 7090]
 11.3 PERMITTEES MUST INSPECT AND MAINTAIN ALL PERMANENT STORMWATER TREATMENT BMPs. [MINN. R. 7090]
 11.4 PERMITTEES MUST INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS. PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL NONFUNCTIONAL BMPs WITH FUNCTIONAL BMPs BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY UNLESS ANOTHER MAINTENANCE SCHEDULE IS ESTABLISHED IN ITEM 11.5 OR 11.6. PERMITTEES MAY TAKE ADDITIONAL TIME IF FIELD CONDITIONS PREVENT ACCESS TO THE AREA. [MINN. R. 7090]
 11.5 DURING EACH INSPECTION, PERMITTEES MUST INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. PERMITTEES MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER COLLECTION DEVICES. PERMITTEES MUST REMOVE AND REPAIR EROSION RESULTS IN EXPOSED SOIL. PERMITTEES MUST COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. PERMITTEES MUST USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF OBTAINING ACCESS. PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS. [MINN. R. 7090]

11.6 PERMITTEES MUST INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS, STREETS AND CURB AND GUTTER SYSTEMS WITHIN AND ADJACENT TO THE PROJECT FOR EVIDENCE OF SEDIMENTATION FROM EROSION OR TRACKED SEDIMENT FROM VEHICLES. PERMITTEES MUST REMOVE SEDIMENT FROM ALL PAVED SURFACES WITHIN ONE (1) CALENDAR DAY OF DISCOVERY OR, IF APPLICABLE, WITHIN A SHORTER TIME TO AVOID A SAFETY HAZARD TO USERS OF PUBLIC STREETS. [MINN. R. 7090]
 11.7 PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL PERIMETER CONTROL DEVICES WHEN THEY BECOME NON FUNCTIONAL OR THE SEDIMENT IS 1/2 OF THE HEIGHT OF THE DEVICE. [MINN. R. 7090]
 11.8 PERMITTEES MUST DRAIN TEMPORARY AND PERMANENT SEDIMENTATION BASINS AND REMOVE THE SEDIMENT WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. [MINN. R. 7090]
 11.9 PERMITTEES MUST ENSURE THAT AT LEAST ONE INDIVIDUAL PRESENT ON THE SITE (OR AVAILABLE TO THE PROJECT SITE IN THREE (3) CALENDAR DAYS) IS TRAINED IN THE JOB DUTIES DESCRIBED IN ITEM 21.2.B. [MINN. R. 7090]
 11.10 PERMITTEES MAY ADJUST THE INSPECTION SCHEDULE DESCRIBED IN ITEM 11.2 AS FOLLOWS:
 A. INSPECTIONS OF AREAS WITH PERMANENT COVER CAN BE REDUCED TO ONCE PER MONTH, EVEN IF CONSTRUCTION ACTIVITY CONTINUES ON OTHER PORTIONS OF THE SITE; OR
 B. WHERE SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES. THE MPCA MAY REQUIRE INSPECTIONS TO RESUME IF CONDITIONS WARRANT; OR
 C. WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INSPECTIONS MAY BE SUSPENDED. INSPECTIONS MUST RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING, OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST. [MINN. R. 7090]
 11.11 PERMITTEES MUST RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP. THESE RECORDS MUST INCLUDE:
 A. DATE AND TIME OF INSPECTIONS; AND
 B. NAME OF PERSONS CONDUCTING INSPECTIONS; AND
 C. ACCURATE FINDINGS OF INSPECTIONS, INCLUDING THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED; AND
 D. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND
 E. DATE OF ALL RAINFALL EVENTS GREATER THAN 1/2 INCHES IN 24 HOURS, AND THE AMOUNT OF RAINFALL FOR EACH EVENT. PERMITTEES MUST OBTAIN RAINFALL AMOUNTS BY EITHER A PROPERLY MAINTAINED RAIN GAUGE INSTALLED ONSITE, A WEATHER STATION THAT IS WITHIN ONE (1) MILE OF YOUR LOCATION, OR A WEATHER REPORTING SYSTEM THAT PROVIDES COMPLETE RAINFALL DATA FROM RADAR SUMMARIES; AND
 F. IF PERMITTEES OBSERVE A DISCHARGE DURING THE INSPECTION, THEY MUST RECORD AND SHOULD PHOTOGRAPH AND DESCRIBE THE LOCATION OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS); AND
 G. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN SECTION 6 WITHIN SEVEN (7) CALENDAR DAYS. [MINN. R. 7090]

12.1 POLLUTION PREVENTION MANAGEMENT MEASURES. [MINN. R. 7090]
 12.2 PERMITTEES MUST PLACE BUILDING PRODUCTS AND LANDSCAPE MATERIALS UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER. PERMITTEES ARE NOT REQUIRED TO COVER OR PROTECT PRODUCTS WHICH ARE EITHER NOT A SOURCE OF CONTAMINATION TO STORMWATER OR ARE DESIGNED TO BE EXPOSED TO STORMWATER. [MINN. R. 7090]
 12.3 PERMITTEES MUST PLACE PESTICIDES, FERTILIZERS AND TREATMENT CHEMICALS UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER. [MINN. R. 7090]
 12.4 PERMITTEES MUST STORE HAZARDOUS MATERIALS AND TOXIC WASTE, INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE. [MINN. R. 7090]
 12.5 PERMITTEES MUST PROPERLY STORE, COLLECT AND DISPOSE SOLID WASTE IN COMPLIANCE WITH MINN. R. CH. 7035. [MINN. R. 7035]
 12.6 PERMITTEES MUST POSITION PORTABLE TOILETS SO THEY ARE SECURE AND WILL NOT TIP OR BE KNOCKED OVER. PERMITTEES MUST PROPERLY DISPOSE SANITARY WASTE IN ACCORDANCE WITH MINN. R. CH. 7041. [MINN. R. 7041]
 12.7 PERMITTEES MUST TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICAL OR FUEL WILL BE LOADED OR UNLOADED INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE. PERMITTEES MUST ENSURE ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. PERMITTEES MUST REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINN. STAT. 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE. [MINN. STAT. 115.061]
 12.8 PERMITTEES MUST LIMIT VEHICLE EXTERIOR WASHING AND EQUIPMENT TO A DEFINED AREA OF THE SITE. PERMITTEES MUST CONTAIN RUNOFF FROM THE WASHING AREA IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND MUST DISPOSE WASTE FROM THE WASHING ACTIVITY PROPERLY. PERMITTEES MUST PROPERLY USE AND STORE SOAPS, DETERGENTS, OR SOLVENTS. [MINN. R. 7090]
 12.9 PERMITTEES MUST PROVIDE EFFECTIVE CONTAMINATION FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (E.G., CONCRETE, STUCCO, PAINT, FLOOR RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. PERMITTEES MUST PREVENT LIQUID AND SOLID WASHOUT WASTES FROM CONTACTING THE GROUND AND MUST DESIGN THE CONTAINMENT SO IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. PERMITTEES MUST PROPERLY DISPOSE LIQUID AND SOLID WASTES IN COMPLIANCE WITH MPCA RULES. PERMITTEES MUST INSTALL A SIGN INDICATING THE LOCATION OF THE WASHOUT FACILITY. [MINN. R. 7035, MINN. R. 7090]

13.1 PERMIT TERMINATION CONDITIONS. [MINN. R. 7090]
 13.2 PERMITTEES MUST COMPLETE ALL CONSTRUCTION ACTIVITY AND MUST INSTALL PERMANENT COVER OVER ALL AREAS PRIOR TO SUBMITTING THE NOT. VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION, SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER. [MINN. R. 7090]
 13.3 PERMITTEES MUST CLEAN THE PERMANENT STORMWATER TREATMENT SYSTEM OF ANY ACCUMULATED SEDIMENT AND MUST ENSURE THE SYSTEM MEETS ALL APPLICABLE REQUIREMENTS IN SECTION 15 THROUGH 19 AND IS OPERATING AS DESIGNED. [MINN. R. 7090]
 13.4 PERMITTEES MUST REMOVE ALL SEDIMENT FROM CONVEYANCE SYSTEMS PRIOR TO SUBMITTING THE NOT. [MINN. R. 7090]
 13.5 PERMITTEES MUST REMOVE ALL TEMPORARY SEDIMENT EROSION PREVENTION AND SEDIMENT CONTROL BMPs PRIOR TO SUBMITTING THE NOT WITHOUT THE APPROVAL OF THE MPCA. [MINN. R. 7090]
 13.6 FOR RESIDENTIAL CONSTRUCTION ONLY, PERMIT COVERAGE TERMINATES ON INDIVIDUAL LOTS IF THE STRUCTURES ARE FINISHED AND TEMPORARY EROSION PREVENTION AND DOWNGRADED PERIMETER CONTROL IS COMPLETE, THE RESIDENCE SELLS TO THE HOMEOWNER, AND THE PERMITTEE DISTRIBUTES THE MPCA'S "HOMEOWNER PACT SHEET" TO THE HOMEOWNER. [MINN. R. 7090]
 13.7 FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., PIPELINES ACROSS CROPLAND), PERMITTEES MUST RETURN THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE PRIOR TO SUBMITTING THE NOT. [MINN. R. 7090]

14.1 TEMPORARY SEDIMENT BASINS. [MINN. R. 7090]
 14.2 WHERE TEN (10) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, PERMITTEES MUST PROVIDE A TEMPORARY SEDIMENT BASIN TO PROVIDE TREATMENT OF THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS. PERMITTEES MAY CONVERT A TEMPORARY SEDIMENT BASIN TO A PERMANENT BASIN AFTER CONSTRUCTION IS COMPLETE. THE TEMPORARY BASIN IS NO LONGER REQUIRED WHEN PERMANENT COVER HAS REDUCED THE ACREAGE OF DISTURBED SOIL TO LESS THAN TEN (10) ACRES DRAINING TO A COMMON LOCATION. [MINN. R. 7090]
 14.3 THE TEMPORARY BASIN MUST PROVIDE LIVE STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A TWO (2)-YEAR, 24-HOUR STORM FROM EACH ACRE DRAINING TO THE BASIN OR 1,800 CUBIC FEET OF LIVE STORAGE PER ACRE DRAINING, WHICHEVER IS GREATER. [MINN. R. 7090]
 14.4 WHERE PERMITTEES HAVE NOT CALCULATED THE TWO (2)-YEAR, 24-HOUR STORM RUNOFF AMOUNT, THE TEMPORARY BASIN MUST PROVIDE 3,600 CUBIC FEET OF LIVE STORAGE PER ACRE OF THE BASINS' DRAINAGE AREA. [MINN. R. 7090]
 14.5 PERMITTEES MUST DESIGN BASIN OUTLETS TO PREVENT SHORT-CIRCUITING AND THE DISCHARGE OF FLOATING DEBRIS. [MINN. R. 7090]
 14.6 PERMITTEES MUST DESIGN THE OUTLET STRUCTURE TO WITHDRAW WATER FROM THE SURFACE TO MINIMIZE THE DISCHARGE OF POLLUTANTS. PERMITTEES MAY TEMPORARILY SUSPEND THE USE OF A SURFACE WITHDRAWAL MECHANISM DURING FROZEN CONDITIONS. THE BASIN MUST INCLUDE A STABILIZED EMERGENCY OVERTFLOW TO PREVENT FAILURE OF POND INTEGRITY. [MINN. R. 7090]
 14.7 PERMITTEES MUST PROVIDE ENERGY DISSIPATION FOR THE BASIN OUTLET WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER. [MINN. R. 7090]
 14.8 PERMITTEES MUST LOCATE TEMPORARY BASINS OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONE REQUIRED IN ITEM 23.11. [MINN. R. 7090]
 14.9 PERMITTEES MUST CONSTRUCT THE TEMPORARY BASINS PRIOR TO DISTURBING 10 OR MORE ACRES OF SOIL DRAINING TO A COMMON LOCATION. [MINN. R. 7090]
 14.10 WHERE A TEMPORARY SEDIMENT BASIN MEETING THE REQUIREMENTS OF ITEM 14.3 THROUGH 14.9 IS INFEASIBLE, PERMITTEES MUST INSTALL EFFECTIVE SEDIMENT CONTROLS SUCH AS SMALLER SEDIMENT BASINS AND/OR SEDIMENT TRAPS, SILT FENCES, VEGETATIVE BUFFER STRIPS OR ANY APPROPRIATE COMBINATION OF MEASURES AS DICTATED BY INDIVIDUAL SITE CONDITIONS. IN DETERMINING WHETHER INSTALLING A SEDIMENT BASIN IS INFEASIBLE, PERMITTEES MUST CONSIDER PUBLIC SAFETY AND MAY CONSIDER FACTORS SUCH AS SITE SLOPS, SLOPE, AND AVAILABLE AREA ON-SITE. PERMITTEES MUST DOCUMENT THIS DETERMINATION OF INFEASIBILITY IN THE SWPPP. [MINN. R. 7090]

15.1 PERMANENT STORMWATER TREATMENT SYSTEM. [MINN. R. 7090]
 15.2 PERMITTEES MUST DESIGN THE PROJECT SO ALL STORMWATER DISCHARGED FROM THE PROJECT DURING AND AFTER CONSTRUCTION ACTIVITIES DOES NOT CAUSE A VIOLATION OF STATE WATER QUALITY STANDARDS, INCLUDING NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR A SIGNIFICANT ADVERSE IMPACT TO WETLANDS CAUSED BY INUNDATION OR DECREASE OF FLOW. [MINN. R. 7090]
 15.3 PERMITTEES MUST DESIGN AND CONSTRUCT A PERMANENT STORMWATER TREATMENT SYSTEM TO TREAT THE WATER QUALITY VOLUME IF THE PROJECT'S ULTIMATE DEVELOPMENT REPLACES VEGETATION AND/OR OTHER PERVIOUS SURFACES CREATING A NET INCREASE OF ONE (1) OR MORE ACRES OF CUMULATIVE IMPERVIOUS SURFACE. [MINN. R. 7090]
 15.4 PERMITTEES MUST CALCULATE THE WATER QUALITY VOLUME AS ONE (1) INCH TIMES THE NET INCREASE OF IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. R. 7090]
 15.5 PERMITTEES MUST FIRST CONSIDER VOLUME REDUCTION PRACTICES ON-SITE (E.G., INFILTRATION OR OTHER) WHEN DESIGNING THE PERMANENT STORMWATER TREATMENT SYSTEM. IF THESE PERMIT PROHIBITS INFILTRATION AS DESCRIBED IN ITEM 16.14 THROUGH 16.21, PERMITTEES MUST DOCUMENT THE REASONS IN THE SWPPP. [MINN. R. 7090]
 15.6 FOR PROJECTS WHERE THE FULL VOLUME REDUCTION REQUIREMENT CANNOT BE MET ON-SITE, (E.G., THE SITE HAS INFILTRATION PROHIBITIONS), PERMITTEES MUST DOCUMENT THE REASONS IN THE SWPPP. [MINN. R. 7090]
 15.7 PERMITTEES MUST DISCHARGE THE WATER QUALITY VOLUME TO A PERMANENT STORMWATER TREATMENT SYSTEM PRIOR TO DISCHARGE TO A SURFACE WATER. FOR PURPOSES OF THIS ITEM, SURFACE WATERS DO NOT INCLUDE MAN-MADE DRAINAGE SYSTEMS THAT CONVEY STORMWATER TO A PERMANENT STORMWATER TREATMENT SYSTEM. [MINN. R. 7090]
 15.8 WHERE THE PROXIMITY TO BEDROCK PRECLUDES THE INSTALLATION OF ANY OF THE PERMANENT STORMWATER TREATMENT PRACTICES REQUIRED BY SECTIONS 15 THROUGH 19, PERMITTEES MUST INSTALL OTHER TREATMENT SUCH AS GRASSES AND SWALES IN SHALLOW PONDS, OR GRIT CHAMBERS, PRIOR TO THE DISCHARGE OF STORMWATER TO SURFACE WATERS. [MINN. R. 7090]
 15.9 FOR LINEAR PROJECTS WHERE PERMITTEES CANNOT TREAT THE ENTIRE WATER QUALITY VOLUME WITHIN THE EXISTING RIGHT-OF-WAY, PERMITTEES MUST MAKE A REASONABLE ATTEMPT TO OBTAIN ADDITIONAL RIGHT-OF-WAY, EASEMENT OR OTHER PERMISSION FOR STORMWATER TREATMENT DURING THE PROJECT PLANNING PROCESS. PERMITTEES MUST DOCUMENT ALL PERMITS AND PERMISSIONS THEY OBTAIN. PERMITTEES MUST STILL CONSIDER VOLUME REDUCTION PRACTICES FIRST AS DESCRIBED IN ITEM 15.5. IF PERMITTEES CANNOT OBTAIN ADDITIONAL RIGHT-OF-WAY, EASEMENT OR OTHER PERMISSION, THEY MUST MAXIMIZE THE TREATMENT OF THE WATER QUALITY VOLUME PRIOR TO DISCHARGE TO SURFACE WATERS. [MINN. R. 7090]
 16.1 INFILTRATION SYSTEMS. [MINN. R. 7090]
 16.2 INFILTRATION OPTIONS INCLUDE, BUT ARE NOT LIMITED TO: INFILTRATION BASINS, INFILTRATION TRENCHES, RAINWATER GARDENS, BIORETENTION AREAS WITHOUT UNDERDRAINS, SWALES WITH IMPERMEABLE CHECK DAMS, AND NATURAL DEPRESSIONS. IF PERMITTEES UTILIZE AN INFILTRATION SYSTEM TO MEET THE REQUIREMENTS OF THIS PERMIT, THEY MUST INCORPORATE THE DESIGN PARAMETERS AND THE FULL SEDIMENTATION BASIN, FILTRATION BASIN OR REGIONAL POND. THIS PERMIT DOES NOT CONSIDER WET SEDIMENTATION BASINS AND FILTRATION SYSTEMS TO BE VOLUME REDUCTION PRACTICES. [MINN. R. 7090]
 16.3 PERMITTEES MUST DESIGN INFILTRATION SYSTEMS SUCH THAT PRE-EXISTING HYDROLOGIC CONDITIONS OF WETLANDS IN THE VICINITY ARE NOT IMPACTED (E.G., INUNDATION OR BREACHING A PERCHED WATER TABLE SUPPORTING A WETLAND). [MINN. R. 7090]
 16.4 PERMITTEES MUST NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN THREE (3) FEET OF FINAL GRADE, UNLESS THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS THEY PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA. [MINN. R. 7090]
 16.5 WHEN EXCAVATING AN INFILTRATION SYSTEM TO WITHIN THREE (3) FEET OF FINAL GRADE, PERMITTEES MUST STAKE OFF AND MARK THE AREA SO HEAVY CONSTRUCTION VEHICLES OR EQUIPMENT DO NOT COMPACT THE SOIL IN THE INFILTRATION AREA. [MINN. R. 7090]
 16.6 PERMITTEES MUST USE A PRETREATMENT DEVICE SUCH AS A VEGETATED FILTER STRIP, FOREBAY, OR WATER QUALITY INLET (E.G., GRIT CHAMBER) TO REMOVE SOLIDS, FLOATING MATERIALS, AND OIL AND GREASE FROM THE RUNOFF, TO THE MAXIMUM EXTENT PRACTICABLE, BEFORE THE SYSTEM ROUTES STORMWATER TO THE INFILTRATION SYSTEM. [MINN. R. 7090]
 16.7 PERMITTEES MUST DESIGN INFILTRATION SYSTEMS TO PROVIDE A WATER QUALITY VOLUME (CALCULATED AS AN INSTANTANEOUS VOLUME) OF ONE (1) INCH OF RUNOFF, OR ONE (1) INCH MINUS THE VOLUME OF STORMWATER TREATED BY ANOTHER SYSTEM ON THE SITE, FROM THE NET INCREASE OF IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. R. 7090]
 16.8 PERMITTEES MUST DESIGN THE INFILTRATION SYSTEM TO DISCHARGE ALL STORMWATER (INCLUDING STORMWATER IN EXCESS OF THE WATER QUALITY VOLUME) ROUTED TO THE SYSTEM THROUGH THE UPPERMOST SOIL SURFACE OR ENGINEERED MEDIA SURFACE WITHIN 48 HOURS. PERMITTEES MUST ROUTE ADDITIONAL FLOWS THAT CANNOT INFILTRATE WITHIN 48 HOURS TO BYPASS THE SYSTEM THROUGH A STABILIZED DISCHARGE POINT. [MINN. R. 7090]
 16.9 PERMITTEES MUST PROVIDE A MEANS TO VISUALLY VERIFY THE INFILTRATION SYSTEM IS DISCHARGING THROUGH THE SOIL SURFACE OR FILTER MEDIA SURFACE WITHIN 48 HOURS OR LESS. [MINN. R. 7090]
 16.10 PERMITTEES MUST PROVIDE AT LEAST ONE SOIL BORING, BEST PIT OR INFILTRATION TEST IN THE LOCATION OF THE INFILTRATION PRACTICE FOR DETERMINING INFILTRATION RATES. [MINN. R. 7090]
 16.11 FOR DESIGN PURPOSES, PERMITTEES MUST DIVIDE FIELD MEASURED INFILTRATION RATES BY 2 AS A SAFETY FACTOR OR PERMITTEES CAN USE SOIL-BORING RESULTS WITH THE INFILTRATION RATE CHART IN THE MINNESOTA STORMWATER MANUAL TO DETERMINE DESIGN INFILTRATION RATES. WHEN SOIL BORINGS INDICATE TYPE A SOILS, PERMITTEES SHOULD PERFORM FIELD MEASUREMENTS TO VERIFY THE RATE IS NOT ABOVE 8.3 INCHES PER HOUR. THIS PERMIT PROHIBITS INFILTRATION IF THE FIELD MEASURED INFILTRATION RATE IS ABOVE 8.3 INCHES PER HOUR. [MINN. R. 7090]
 16.12 PERMITTEES MUST EMPLOY APPROPRIATE ON-SITE TESTING ENSURE A MINIMUM OF THREE (3) FEET OF SEPARATION FROM THE SEASONALLY SATURATED SOILS (OR FROM BEDROCK) AND THE BOTTOM OF THE PROPOSED INFILTRATION SYSTEM. [MINN. R. 7090]
 16.13 PERMITTEES MUST DESIGN A MAINTENANCE ACCESS, TYPICALLY EIGHT (8) FEET WIDE, FOR THE INFILTRATION SYSTEM. [MINN. R. 7090]
 16.14 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS THAT RECEIVE RUNOFF FROM VEHICLE FUELINGS AND MAINTENANCE AREAS INCLUDING CONSTRUCTION OF INFILTRATION SYSTEMS NOT REQUIRED BY THIS PERMIT. [MINN. R. 7090]
 16.15 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS WHERE INFILTRATING STORMWATER MAY MOBILIZE HIGH LEVELS OF CONTAMINANTS IN SOIL OR GROUNDWATER. PERMITTEES MUST EITHER COMPLETE THE CONTAMINATION SCREENING CHECKLIST OR CONDUCT THEIR OWN CONTAMINATION SCREENING TO DETERMINE THE SUITABILITY FOR INFILTRATION. PERMITTEES MUST RETAIN THE CHECKLIST OR ASSIGNED SWPPP FOR MORE INFORMATION AND TO ACCESS THE MPCA'S "CONTAMINATION SCREENING CHECKLIST" SEE THE MINNESOTA STORMWATER MANUAL. [MINN. R. 7090]
 16.16 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS WHERE SOIL INFILTRATION RATES ARE FIELD MEASURED AT MORE THAN 8.3 INCHES PER HOUR UNLESS THEY AMEND SOILS TO SLOW THE INFILTRATION RATE BELOW 8.3 INCHES PER HOUR. [MINN. R. 7090]
 16.17 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS WITH LESS THAN THREE (3) FEET OF SEPARATION DISTANCE FROM THE BOTTOM OF THE INFILTRATION SYSTEM TO THE ELEVATION OF THE SEASONALLY SATURATED SOILS OR THE TOP OF BEDROCK. [MINN. R. 7090]
 16.18 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS OF PREDOMINANTLY HYDROLOGIC GROUP TYPE D SOILS. [MINN. R. 7090]
 16.19 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS WITHIN A DRINKING WATER SUPPLY MANAGEMENT AREA (DWSMA) AS DEFINED IN MINN. R. 4720.5100, SUBP. 13, IF THE SYSTEM WILL BE LOCATED:
 A. IN AN EMERGENCY RESPONSE AREA (ERA) WITHIN A DWSMA CLASSIFIED AS HAVING HIGH OR VERY HIGH VULNERABILITY AS DEFINED BY THE MINNESOTA DEPARTMENT OF HEALTH; OR
 B. IN AN ERA WITHIN A DWSMA CLASSIFIED AS MODERATE VULNERABILITY UNLESS A REGULATED MSA PERMITTEE PERFORMED OR APPROVED A HIGHER LEVEL OF ENGINEERING REVIEW SUFFICIENT TO PROVIDE A FUNCTIONING TREATMENT SYSTEM AND TO PREVENT ADVERSE IMPACTS TO GROUNDWATER; OR
 C. OUTSIDE OF AN ERA WITHIN A DWSMA CLASSIFIED AS HAVING HIGH OR VERY HIGH VULNERABILITY, UNLESS A REGULATED MSA PERMITTEE PERFORMED OR APPROVED A HIGHER LEVEL OF ENGINEERING REVIEW SUFFICIENT TO PROVIDE A FUNCTIONING TREATMENT SYSTEM AND TO PREVENT ADVERSE IMPACTS TO GROUNDWATER.
 SEE "HIGHER LEVEL OF ENGINEERING REVIEW" IN THE MINNESOTA STORMWATER MANUAL FOR MORE INFORMATION. [MINN. R. 7090]
 16.20 THIS PERMIT PROHIBITS PERMITTEES FROM CONSTRUCTING INFILTRATION SYSTEMS IN AREAS WITHIN 1,000 FEET

17.1 FILTRATION SYSTEMS. [MINN. R. 7090]
 17.2 FILTRATION OPTIONS INCLUDE, BUT ARE NOT LIMITED TO: SAND FILTERS WITH UNDERDRAINS, BIOFILTRATION AREAS, SWALES USING UNDERDRAINS WITH IMPERMEABLE CHECK DAMS AND UNDERGROUND SAND FILTERS. IF PERMITTEES UTILIZE A FILTRATION SYSTEM TO MEET THE PERMANENT STORMWATER TREATMENT REQUIREMENTS OF THIS PERMIT, THEY MUST COMPLY WITH ITEMS 17.1 THROUGH 17.11. [MINN. R. 7090]
 17.3 PERMITTEES MUST NOT INSTALL FILTER MEDIA UNTIL THEY CONSTRUCT AND FULLY STABILIZE THE CONTRIBUTING DRAINAGE AREA UNLESS THEY PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE FILTRATION AREA. [MINN. R. 7090]
 17.4 PERMITTEES MUST DESIGN FILTRATION SYSTEMS TO REMOVE AT LEAST 80 PERCENT OF TSS. [MINN. R. 7090]
 17.5 PERMITTEES MUST USE A PRETREATMENT DEVICE SUCH AS A VEGETATED FILTER STRIP, SMALL SEDIMENTATION BASIN, WATER QUALITY INLET, FOREBAY OR HYDRODYNAMIC SEPARATOR TO REMOVE SETTLEABLE SOLIDS, FLOATING MATERIALS, AND OILS AND GREASE FROM THE RUNOFF, TO THE MAXIMUM EXTENT PRACTICABLE, BEFORE RUNOFF ENTERS THE FILTRATION SYSTEM. [MINN. R. 7090]
 17.6 PERMITTEES MUST DESIGN FILTRATION SYSTEMS TO TREAT A WATER QUALITY VOLUME (CALCULATED AS AN INSTANTANEOUS VOLUME) OF ONE (1) INCH OF RUNOFF, OR ONE (1) INCH MINUS THE VOLUME OF STORMWATER TREATED BY ANOTHER SYSTEM ON THE SITE, FROM THE NET INCREASE OF IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. R. 7090]
 17.7 PERMITTEES MUST DESIGN THE FILTRATION SYSTEM TO DISCHARGE ALL STORMWATER (INCLUDING STORMWATER IN EXCESS OF THE WATER QUALITY VOLUME) ROUTED TO THE SYSTEM THROUGH THE UPPERMOST SOIL SURFACE OR ENGINEERED MEDIA SURFACE WITHIN 48 HOURS. ADDITIONAL FLOWS THAT THE SYSTEM CANNOT FILTER WITHIN 48 HOURS MUST BYPASS THE SYSTEM OR DISCHARGE THROUGH AN EMERGENCY OVERTFLOW. [MINN. R. 7090]
 17.8 PERMITTEES MUST DESIGN THE FILTRATION SYSTEM TO PROVIDE A MEANS TO VISUALLY VERIFY THE SYSTEM IS DISCHARGING THROUGH THE SOIL SURFACE OR FILTER MEDIA WITHIN 48 HOURS. [MINN. R. 7090]
 17.9 PERMITTEES MUST EMPLOY APPROPRIATE ON-SITE TESTING TO ENSURE A MINIMUM OF THREE (3) FEET OF SEPARATION BETWEEN THE SEASONALLY SATURATED SOILS (OR FROM BEDROCK) AND THE BOTTOM OF THE PROPOSED FILTRATION SYSTEM. [MINN. R. 7090]
 17.10 PERMITTEES MUST ENSURE THAT FILTRATION SYSTEMS WITH LESS THAN THREE (3) FEET OF SEPARATION BETWEEN SEASONALLY SATURATED SOILS OR FROM BEDROCK ARE CONSTRUCTED WITH AN IMPERMEABLE LINER. [MINN. R. 7090]
 17.11 THE PERMITTEES MUST DESIGN A MAINTENANCE ACCESS, TYPICALLY EIGHT (8) FEET WIDE, FOR THE FILTRATION SYSTEM. [MINN. R. 7090]

18.1 WET SEDIMENTATION BASIN. [MINN. R. 7090]
 18.2 PERMITTEES USING A WET SEDIMENTATION BASIN TO MEET THE PERMANENT STORMWATER TREATMENT REQUIREMENTS OF THIS PERMIT MUST INCORPORATE THE DESIGN PARAMETERS IN ITEM 18.3 THROUGH 18.10. [MINN. R. 7090]
 18.3 PERMITTEES MUST DESIGN THE BASIN TO HAVE A PERMANENT VOLUME OF 1,800 CUBIC FEET OF STORAGE BELOW THE OUTLET PIPE FOR EACH ACRE THAT DRAINS TO THE BASIN. THE BASIN'S PERMANENT VOLUME MUST REACH A MINIMUM DEPTH OF AT LEAST THREE (3) FEET AND MUST HAVE NO DEPTH GREATER THAN 10 FEET. PERMITTEES MUST CONFIGURE THE BASIN TO MINIMIZE SCOUR OR RESUSPENSION OF SOLIDS. [MINN. R. 7090]
 18.4 PERMITTEES MUST DESIGN THE BASIN TO PROVIDE LIVE STORAGE FOR A WATER QUALITY VOLUME (CALCULATED AS AN INSTANTANEOUS VOLUME) OF ONE (1) INCH OF RUNOFF, OR ONE (1) INCH MINUS THE VOLUME OF STORMWATER TREATED BY ANOTHER SYSTEM ON THE SITE, FROM THE NET INCREASE IN IMPERVIOUS SURFACES CREATED BY THE PROJECT. [MINN. R. 7090]
 18.5 PERMITTEES MUST DESIGN BASIN OUTLETS SO THE WATER QUALITY VOLUME DISCHARGES AT NO MORE THAN 5.66 CUBIC FEET PER ACRE OF SURFACE AREA OF THE BASIN. [MINN. R. 7090]
 18.6 PERMITTEES MUST DESIGN BASIN OUTLETS TO PREVENT SHORT-CIRCUITING AND THE DISCHARGE OF FLOATING DEBRIS. BASIN OUTLETS MUST HAVE ENERGY DISSIPATION. [MINN. R. 7090]
 18.7 PERMITTEES MUST DESIGN THE BASIN TO INCLUDE A STABILIZED EMERGENCY OVERTFLOW TO ACCOMMODATE STORM EVENTS IN EXCESS OF THE BASIN'S HYDRAULIC DESIGN. [MINN. R. 7090]
 18.8 PERMITTEES MUST DESIGN A MAINTENANCE ACCESS, TYPICALLY EIGHT (8) FEET WIDE, FOR THE BASIN. [MINN. R. 7090]
 18.9 PERMITTEES MUST LOCATE BASINS OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONE REQUIRED IN ITEM 23.11. PERMITTEES MUST DESIGN BASINS TO AVOID DRAINING WATER FROM WETLANDS UNLESS THE IMPACT TO THE WETLAND COMPLES WITH THE REQUIREMENTS OF SECTION 22. [MINN. R. 7090]
 18.10 PERMITTEES MUST DESIGN BASINS USING AN IMPERMEABLE LINER IF LOCATED WITHIN ACTIVE KARST TERRAIN. [MINN. R. 7090]

19.1 REGIONAL WET SEDIMENTATION BASINS. [MINN. R. 7090]
 19.2 WHEN THE ENTIRE WATER QUALITY VOLUME CANNOT BE RETAINED ONSITE, PERMITTEES CAN USE OR CREATE REGIONAL WET SEDIMENTATION BASINS PROVIDED THEY ARE CONSTRUCTED BASINS, NOT A NATURAL WETLAND OR WATER BODY, (WETLANDS USED AS REGIONAL BASINS MUST BE MITIGATED FOR, SEE SECTION 22). THE OWNER MUST ENSURE THE BASIN IS IN FULL COMPLIANCE WITH ALL REQUIREMENTS FOR A WET SEDIMENTATION BASIN AS DESCRIBED IN ITEMS 18.3 THROUGH 18.10 AND MUST BE LARGE ENOUGH TO ACCOUNT FOR THE ENTIRE AREA THAT DRAINS TO THE REGIONAL BASIN. PERMITTEES MUST VERIFY THAT THE REGIONAL BASIN WILL DISCHARGE AT NO MORE THAN 5.66 CFS PER ACRE OF SURFACE AREA OF THE BASIN AND MUST PROVIDE A LIVE STORAGE VOLUME OF ONE INCH TIMES ALL THE IMPERVIOUS AREA DRAINING TO THE BASIN. PERMITTEES MUST OBTAIN NECESSARY DEGRADE WATERWAYS WITHIN THE PROJECT AND THE REGIONAL BASIN. THE OWNER MUST OBTAIN WRITTEN AUTHORIZATION FROM THE APPLICABLE LGU OR PRIVATE ENTITY THAT OWNS AND MAINTAINS THE REGIONAL BASIN. [MINN. R. 7090]

20.1 SWPPP AVAILABILITY. [MINN. R. 7090]
 20.2 PERMITTEES MUST KEEP THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS AT THE SITE DURING NORMAL WORKING HOURS BY PERMITTEES WHO HAVE OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. [MINN. R. 7090]
 21.1 TRAINING REQUIREMENTS. [MINN. R. 7090]
 21.2 PERMITTEES MUST ENSURE ALL OF THE FOLLOWING INDIVIDUALS RECEIVE TRAINING AND THE CONTENT AND EXTENT OF THE TRAINING IS COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THIS PERMIT:
 A. INDIVIDUALS PREPARING THE SWPPP FOR THE PROJECT.
 B. INDIVIDUALS OVERSEEING IMPLEMENTATION OF, REVISING AND/OR AMENDING THE SWPPP AND INDIVIDUALS PERFORMING INSPECTIONS FOR THE PROJECT. ONE OF THESE INDIVIDUALS MUST BE AVAILABLE FOR AN ONSITE CONSTRUCTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA.
 C. INDIVIDUALS PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPs. [MINN. R. 7090]
 21.3 PERMITTEES MUST ENSURE INDIVIDUALS IDENTIFIED IN SECTION 21 RECEIVE TRAINING FROM LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER TREATMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT. PERMITTEES MUST ENSURE THESE INDIVIDUALS ATTEND A REFRESHER-TRAINING COURSE EVERY THREE (3) YEARS. [MINN. R. 7090]

24.1 GENERAL PROVISIONS. [MINN. R. 7090]
 24.2 IF THE MPCA DETERMINES THAT AN INDIVIDUAL PERMIT WOULD MORE APPROPRIATELY REGULATE THE CONSTRUCTION ACTIVITY, THE MPCA MAY REQUIRE AN INDIVIDUAL PERMIT TO CONTINUE THE CONSTRUCTION ACTIVITY. COVERAGE UNDER THIS GENERAL PERMIT WILL REMAIN IN EFFECT UNTIL THE MPCA ISSUES AN INDIVIDUAL PERMIT. [MINN. R. 7001.0210, SUBP. 6]
 24.3 IF THE PERMITTEE CANNOT MEET THE TERMS AND CONDITIONS OF THIS GENERAL PERMIT, AN OWNER MAY REQUEST AN INDIVIDUAL PERMIT, IN ACCORDANCE WITH MINN. R. 7001.0210 SUBP. 6. [MINN. R. 7001.0210, SUBP. 6]
 24.4 ANY INTERESTED PERSON MAY PETITION THE MPCA TO REQUIRE AN INDIVIDUAL NPDES/SDS PERMIT IN ACCORDANCE WITH 40 CFR 122.28(b)(3). (40 CFR 122.29(b)(3))
 24.5 PERMITTEES MUST MAKE THE SWPPP, INCLUDING ALL INSPECTION REPORTS, MAINTENANCE RECORDS, TRAINING RECORDS AND OTHER INFORMATION REQUIRED BY THIS PERMIT, AVAILABLE TO FEDERAL, STATE, AND LOCAL OFFICIALS WITHIN FIVE (5) DAYS UPON REQUEST FOR THE DURATION OF THE PERMIT AND FOR THREE (3) YEARS FOLLOWING THE NOT. [MINN. R. 7090]
 24.6 PERMITTEES MAY NOT ASSIGN OR TRANSFER THIS PERMIT EXCEPT WHEN THE TRANSFER OCCURS IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ITEM 3.7 AND 3.8. [MINN. R. 7090]
 24.7 NOTHING IN THIS PERMIT MUST BE CONSTRUED TO RELIEVE THE PERMITTEES FROM CIVIL OR CRIMINAL PENALTIES FOR NONCOMPLIANCE WITH THE TERMS AND CONDITIONS PROVIDED HEREIN. NOTHING IN THIS PERMIT MUST BE CONSTRUED TO PREVENT OR RELIEVE THE PERMITTEE FROM ANY LEGAL ACTION OR RELIEF THE PERMITTEES FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITTEES IS/ARE OR MAY BE SUBJECT TO UNDER SECTION 311 OF THE CLEAN WATER ACT AND MINN. STAT. SECT. 115 AND 116, AS AMENDED. PERMITTEES ARE NOT LIABLE FOR PERMIT REQUIREMENTS FOR ACTIVITIES OCCURRING ON THOSE PORTIONS OF A SITE WHERE THE PERMIT HAS BEEN TRANSFERRED TO ANOTHER PARTY AS REQUIRED IN ITEM 3.7 OR THE PERMITTEES HAVE SUBMITTED THE NOT AS REQUIRED IN SECTION 4. [MINN. R. 7090]
 24.8 THE PROVISIONS OF THIS PERMIT ARE SEVERABLE. IF ANY PROVISION OF THIS PERMIT OR THE APPLICATION OF ANY PROVISION OF THIS PERMIT TO ANY CIRCUMSTANCES IS HELD INVALID, THE APPLICATION OF SUCH PROVISION TO OTHER CIRCUMSTANCES, AND THE REMAINDER OF THIS PERMIT MUST NOT BE AFFECTED THEREBY. [MINN. R. 7090]
 24.9 THE PERMITTEES MUST COMPLY WITH THE PROVISIONS OF MINN. R. 7001.0150, SUBP. 3 AND MINN. R. 7001.1090, SUBP. 1(A), (B), (C), (4), (10), (12), (14), AND 1(L). [MINN. R. 7090]
 24.10 THE PERMITTEES MUST ALLOW ACCESS AS PROVIDED IN 40 CFR 122.41(f) AND MINN. STAT. SECT. 115.04. THE PERMITTEES MUST ALLOW REPRESENTATIVES OF THE MPCA OR ANY MEMBER, EMPLOYEE OR AGENT THEREOF, WHEN AUTHORIZED BY IT, UPON PRESENTATION OF CREDENTIALS, TO ENTER UPON ANY PROPERTY, PUBLIC OR PRIVATE, FOR THE PURPOSE OF OBTAINING INFORMATION OR EXAMINATION OF RECORDS OR CONDUCTING SURVEYS OR INVESTIGATIONS. [40 CFR 122.41(f)]
 24.11 FOR THE PURPOSES OF MINN. R. 7090 AND OTHER DOCUMENTS THAT REFERENCE SPECIFIC SECTIONS OF THIS PERMIT, "STORMWATER DISCHARGE DESIGN REQUIREMENTS" CORRESPONDS TO SECTIONS 5, 6 AND 14 THROUGH 21; "CONSTRUCTION ACTIVITY REQUIREMENTS" CORRESPONDS TO SECTIONS 7 THROUGH 13; AND "APPENDIX A" CORRESPONDS TO SECTIONS 22 AND 23. [MINN. R. 7090]

1. DRAWN BY: M.Q.A. DESIGN BY: Q.M.A.
 2. CHECKED BY: M.Q.A. PROJ. NO.: 24-2141
 3. ORIGINAL DATE: MAY 3, 2024
 4. I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 5. GASEM M. ABULHAZEM L.C. NO.: 56289 DATE: 05.23.2024
 6. ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING HAWK LAKE, MINNESOTA
 7. STORM WATER POLLUTION PREVENTION PLAN
 8. PREPARED FOR: GLEN HARSTAD
 9. SITE PLANNING & ENGINEERING
 10. PLOWE ENGINEERING, INC.
 11. 6776 LAKE DRIVE SUITE 110 LINO LAKE, MN 55014
 12. PHONE: (651) 361-8210 FAX: (651) 361-8701

STORM WATER POLLUTION PREVENTION PLAN

ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING

C6.1

S:\blawca\24042024\14. Lincoln Street Commercial Bldg (Item 14a) 24-2141.dwg
 5/23/2024

PROJECT TITLE
ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING

PROJECT LOCATION
ADDRESS: NORTH OF 13860 LINCOLN ST NE,
HAM LAKE, MN 55449
PID: 32-32-23-21-0009

LATITUDE: 45.223
LONGITUDE: -93.240

DEVELOPER
GLEN HARSTAD
14152 TERRACE BLVD
HAM LAKE, MN 55304

GENERAL CONTRACTOR
TBD

NARRATIVE - PERMANENT STORMWATER TREATMENT SYSTEMS
PERMANENT STORMWATER MANAGEMENT FEATURES INCLUDE A NURP BASIN THAT WILL PROVIDE WATER QUALITY AND RATE CONTROL.

SITE IMPERVIOUS AREAS table with columns: BEFORE CONSTRUCTION, AFTER CONSTRUCTION, TOTAL SITE AREA (DRAINAGE AREA), TOTAL ESTIMATED IMPERVIOUS, TOTAL ESTIMATED PERVIOUS.

TOTAL DISTURBED AREA
~2.10 ACRES

SITE MAP W/ EXISTING AND FINAL GRADES AND DESIGN CALCULATIONS
SEE "STORMWATER DRAINAGE REPORT" FOR EXISTING AND PROPOSED AREA MAPS, DENOTING DRAINAGE AREA BOUNDARIES, DIRECTIONS OF FLOW, AND DISCHARGE POINTS WHERE STORMWATER LEAVES THE SITE.

RECEIVING WATERS WITHIN ONE MILE table with columns: NAME OF WATER BODY, TYPE OF WATER BODY, SPECIAL WATER, IMPAIRED WATER.

BUFFER TO SURFACE WATER
IF THE SITE DRAINS TO A SURFACE WATER, IS A 50-FT NATURAL BUFFER ADJACENT TO THE SURFACE WATER PRESERVED?

TEMPORARY SEDIMENTATION BASINS
IF TEN (10) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, IS A TEMPORARY SEDIMENT BASIN PROVIDED FOR TREATMENT OF THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS?

INFILTRATION FEASIBILITY
ARE THERE ANY INFILTRATION RESTRICTIONS FOR THE SITE (SEE 16.14 THROUGH 16.21)?

ADDITIONAL STORMWATER MITIGATION MEASURES
ARE THERE ANY STORMWATER MITIGATION MEASURES PER: ENVIRONMENTAL REVIEW DOCUMENT? ENDANGERED SPECIES REVIEW? ARCHAEOLOGICAL REVIEW? OTHER LOCAL, STATE OR FEDERAL REVIEW?

IF YES TO ANY OF THE ABOVE, DESCRIBE THE MITIGATION MEASURES. FOR PURPOSES OF THIS PERMIT, MITIGATION MEASURES MEANS ACTIONS NECESSARY TO AVOID, MINIMIZE, OR MITIGATE FOR IMPACTS RELATED TO EROSION PREVENTION, SEDIMENT CONTROL, THE PERMANENT STORMWATER TREATMENT SYSTEM, POLLUTION PREVENTION MANAGEMENT MEASURES AND DISCHARGES ASSOCIATED WITH THE PROJECTS CONSTRUCTION ACTIVITY.

DOCUMENTATION OF TRAINED INDIVIDUALS table with columns: CONTACT NAME, CONTACT PHONE, CONTACT E-MAIL, TBD - WHEN INFORMATION BECOMES AVAILABLE, CONTRACTOR TO PROVIDE INFORMATION TO CITY AND WATERSHED.

LONG TERM OPERATION AND MAINTENANCE OF PERMANENT STORMWATER FACILITIES
THE PROPOSED STORMWATER MANAGEMENT FEATURE FOR THIS SITE IS A NURP BASIN. THIS WILL BE OPERATED AND MAINTAINED BY THE LANDOWNER.

REVEGETATION SPECIFICATIONS table with columns: ITEM, MNDOT SPECIFICATION/NOTES.

QUANTITIES - ESTIMATED QUANTITIES FOR EROSION AND SEDIMENT CONTROL MEASURES table with columns: TYPE, UNIT.

NARRATIVE - TIMING FOR INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES
ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS OR IMPLEMENTED IN THE FIELD SHALL BE IN ACCORDANCE WITH THE CITY AND NPDES PHASE II PERMIT REQUIREMENTS.

- PHASE I: 1. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND SWPPP MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES. 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE. 3. PROVIDE TEMPORARY PARKING AND STORAGE AREA. 4. INSTALL SILT FENCE AS SHOWN ON PLAN. 4.1. ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE. 4.2. THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION. 4.3. SILT FENCE SHALL REMAIN IN-PLACE UNTIL SITE HAS BEEN STABILIZED. 4.4. CONTRACTOR TO PROVIDE ADDITIONAL SILT FENCE, BIOROLLS, EROSION CONTROL BLANKET OR OTHER APPROVED EQUAL FOR ANY SLOPES THAT APPEAR TO BE FAILING. 10. INSTALL INLET PROTECTION FOR ALL EXISTING STORM SEWER STRUCTURES. 11. INSTALL TREE PROTECTION FENCING AS APPLICABLE. 12. PERFORM SITE GRADING ON AN AREA-BY-AREA BASIS TO MINIMIZE UNSTABILIZED AREAS. 12.1. CONTRACTOR MUST IMMEDIATELY INITIATE STABILIZATION OF EXPOSED SOIL AREAS, AS DESCRIBED IN ITEM 8.4 OF THE PERMIT, AND COMPLETE THE STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE TEMPORARILY OR PERMANENTLY CEASES. 12.2. CONTRACTOR TO PROVIDE TEMPORARY SEDIMENTATION BASINS AS REQUIRED IN SECTION 14.1 THROUGH 14.10. 13. PAY SPECIAL ATTENTION TO ADJACENT PROPERTY LINES TO ENSURE THE EROSION CONTROL PRACTICES IN PLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES. 14. STABILIZE SOIL STOCKPILES; STABILIZATION SHALL BE INITIATED IMMEDIATELY. 15. FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS. 16. CONTRACTOR SHALL BE RESPONSIBLE TO SWEEP/SCRAPE ADJACENT STREETS WHEN MATERIALS OR DEBRIS HAVE WASHED/FLOWED ONTO ADJACENT STREETS OR AS DIRECTED BY CITY.

- PHASE II: 1. PROVIDE TEMPORARY SEED FOR DISTURBED AREAS. 2. INSTALL RIP-RAP AT FLARED-END SECTIONS. 3. INSTALL TEMPORARY INLET PROTECTION FOR ALL STORM SEWER INLET STRUCTURES IN PAVING AREAS. INSTALL UTILITIES INCLUDING SANITARY SEWER, WATER MAIN, STORM SEWER. 4. INSTALL CURB AND GUTTER. 5. PREPARE SITE FOR PAVING. 6. PAVE SITE. 6.1. COORDINATE SMALL UTILITIES INSTALLATIONS (GAS, PHONE, ELECTRIC, CABLE, FIBEROPTIC, ETC.) AFTER PAVEMENT INSTALLATION. 7. INSTALL INLET PROTECTION DEVICES. 8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND/OR SOD. 9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ONLY AFTER SITE HAS BEEN STABILIZED.

NPDES DEFINITIONS

"BEST MANAGEMENT PRACTICES (BMP'S)" MEANS THE MOST EFFECTIVE AND PRACTICABLE MEANS OF EROSION PREVENTION AND SEDIMENT CONTROL AND WATER QUALITY MANAGEMENT PRACTICES THAT ARE THE MOST EFFECTIVE AND PRACTICABLE MEANS OF TO CONTROL, PREVENT, AND MINIMIZE DEGRADATION OF SURFACE WATER, INCLUDING AVOIDANCE OF IMPACTS, CONSTRUCTION PHASING, MINIMIZING THE LENGTH OF TIME SOIL AREAS ARE EXPOSED, PROHIBITIONS, POLLUTION PREVENTION THROUGH GOOD HOUSEKEEPING, AND OTHER MANAGEMENT PRACTICES PUBLISHED BY STATE OR DESIGNATED AREA-WIDE PLANNING AGENCIES. [MINN. R. 7090]

"DEWATERING" MEANS THE REMOVAL OF SURFACE OR GROUND WATER TO DRY AND/OR SOLIDIFY A CONSTRUCTION SITE TO ENABLE CONSTRUCTION ACTIVITY. DEWATERING MAY REQUIRE A MINNESOTA DEPARTMENT OF NATURAL RESOURCES WATER APPROPRIATION PERMIT AND, IF DEWATERING WATER IS CONTAMINATED, DISCHARGE OF SUCH WATER MAY REQUIRE AN INDIVIDUAL MPCA NPDES/SIDS PERMIT. [MINN. R. 7090]

"EROSION PREVENTION" MEANS MEASURES EMPLOYED TO PREVENT EROSION SUCH AS SOIL STABILIZATION PRACTICES, PERMANENT COVER OR CONSTRUCTION PHASING. [MINN. R. 7090]

"GENERAL CONTRACTOR" MEANS THE PARTY WHO SIGNS THE CONSTRUCTION CONTRACT WITH THE OWNER TO CONSTRUCT THE ENTIRE PROJECT DESCRIBED IN THE FINAL PLANS AND SPECIFICATIONS. WHERE THE CONSTRUCTION PROJECT INVOLVES MORE THAN ONE CONTRACTOR, THE GENERAL CONTRACTOR IS THE PARTY RESPONSIBLE FOR MANAGING THE ENTIRE PROJECT ON BEHALF OF THE OWNER. IN SOME CASES, THE OWNER IS THE GENERAL CONTRACTOR. IN THESE CASES, THE OWNER SIGNS THE PERMIT APPLICATION AS THE OPERATOR AND BECOMES THE SOLE PERMITTEE. [MINN. R. 7090]

"GROUNDWATER" MEANS THE WATER CONTAINED BELOW THE SURFACE OF THE EARTH IN THE SATURATED ZONE INCLUDING, WITHOUT LIMITATION, ALL WATERS WHETHER UNDER CONFINED, UNCONFINED, OR PERCHED CONDITIONS, IN NEAR SURFACE UNCONSOLIDATED SEDIMENT OR REGOLITH, OR IN ROCK FORMATIONS DEEPER UNDERGROUND. [MINN. R. 7090]

"HOMEOWNER FACT SHEET" MEANS AN MPCA FACT SHEET AVAILABLE ON THE MPCA CONSTRUCTION STORMWATER WEBSITE FOR PERMITTEES TO GIVE TO HOMEOWNERS AT THE TIME OF SALE. [MINN. R. 7090]

"INFEASIBLE" MEANS NOT TECHNOLOGICALLY POSSIBLE OR NOT ECONOMICALLY PRACTICABLE AND ACHIEVABLE IN LIGHT OF THE BEST INDUSTRY PRACTICES. [MINN. R. 7090]

"INITIATED IMMEDIATELY" MEANS TAKING AN ACTION TO COMMENCE SOIL STABILIZATION AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE WORK DAY, FOLLOWING THE DAY WHEN THE LAND-DISTURBING ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE, IF THE PERMITTEES KNOW THAT CONSTRUCTION WORK ON THAT PORTION OF THE SITE WILL BE TEMPORARILY CEASED FOR 14 OR MORE ADDITIONAL CALENDAR DAYS OR 7 CALENDAR DAYS WHERE ITEM 23.9 APPLIES. PERMITTEES CAN INITIATE STABILIZATION BY: A. PREPPING THE SOIL FOR VEGETATIVE OR NON-VEGETATIVE STABILIZATION; OR B. APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT TO THE EXPOSED SOIL AREA; OR C. SEEDING OR PLANTING THE EXPOSED AREA; OR D. STARTING ANY OF THE ACTIVITIES IN A - C ON A PORTION OF THE AREA TO BE STABILIZED, BUT NOT ON THE ENTIRE AREA; OR E. FINALIZING ARRANGEMENTS TO HAVE STABILIZATION PRODUCT FULLY INSTALLED IN COMPLIANCE WITH THE APPLICABLE DEADLINE FOR COMPLETING STABILIZATION. [MINN. R. 7090]

"IMPERVIOUS SURFACE" MEANS A CONSTRUCTED HARD SURFACE THAT EITHER PREVENTS OR RETARDS THE ENTRY OF WATER INTO THE SOIL AND CAUSES WATER TO RUN OFF THE SURFACE IN GREATER QUANTITIES AND AT AN INCREASED RATE OF FLOW THAN PRIOR TO DEVELOPMENT. EXAMPLES INCLUDE ROOFTOPS, SIDEWALKS, DRIVEWAYS, PARKING LOTS, AND CONCRETE, ASPHALT, OR GRAVEL ROADS, BRIDGES OVER SURFACE WATERS ARE CONSIDERED IMPERVIOUS SURFACES. [MINN. R. 7090]

"NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)" MEANS THE PROGRAM FOR ISSUING, MODIFYING, REVOKING, REISSUING, TERMINATING, MONITORING, AND ENFORCING PERMITS UNDER THE CLEAN WATER ACT, AS AMENDED (33 U.S.C. 1251 ET SEQ. SECTION 1342 AND 40 CFR PARTS 122, 123, 124 AND 450). [MINN. R. 7090]

"NATURAL BUFFER" MEANS AN AREA OF UNDISTURBED COVER SURROUNDING SURFACE WATERS WITHIN WHICH CONSTRUCTION ACTIVITIES ARE RESTRICTED. NATURAL BUFFER INCLUDES THE VEGETATION, EXPOSED ROCK, OR BARREN GROUND THAT EXISTS PRIOR TO COMMENCEMENT OF EARTH-DISTURBING ACTIVITIES. [MINN. R. 7090]

"NOTICE OF TERMINATION (NOT)" MEANS THE FORM (ELECTRONIC OR PAPER) REQUIRED FOR TERMINATING COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT. [MINN. R. 7090]

"OPERATOR" MEANS THE PERSON (USUALLY THE GENERAL CONTRACTOR), FIRM, GOVERNMENTAL AGENCY, OR OTHER ENTITY DESIGNATED BY THE OWNER WHO HAS DAY TO DAY OPERATIONAL CONTROL AND/OR THE ABILITY TO MODIFY PROJECT PLANS AND SPECIFICATIONS RELATED TO THE SWPPP. THE PERMIT APPLICATION MUST LIST THE OPERATOR AS A PERMITTEE. SUBCONTRACTORS HIRED BY AND UNDER SUPERVISION OF THE GENERAL CONTRACTOR ARE NOT OPERATORS. [MINN. R. 7090]

"OWNER" MEANS THE PERSON, FIRM, GOVERNMENTAL AGENCY, OR OTHER ENTITY POSSESSING THE TITLE OF THE LAND ON WHICH THE CONSTRUCTION ACTIVITIES WILL OCCUR OR, IF THE CONSTRUCTION ACTIVITY IS FOR A LEASE, EASEMENT, OR MINERAL RIGHTS LICENSE HOLDER, THE PARTY OR INDIVIDUAL IDENTIFIED AS THE LEASE, EASEMENT OR MINERAL RIGHTS LICENSE HOLDER; OR THE CONTRACTING GOVERNMENT AGENCY RESPONSIBLE FOR THE CONSTRUCTION ACTIVITY. [MINN. R. 7090]

"PERMANENT COVER" MEANS SURFACE TYPES THAT WILL PREVENT SOIL FAILURE UNDER EROSION CONDITIONS. EXAMPLES INCLUDE: GRAVEL, CONCRETE, PERENNIAL COVER, OR OTHER LANDSCAPED MATERIAL THAT WILL PERMANENTLY ARREST SOIL EROSION. PERMITTEES MUST ESTABLISH A UNIFORM PERENNIAL VEGETATIVE COVER (I.E., EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) WITH A DENSITY OF 70 PERCENT OF THE NATIVE BACKGROUND VEGETATIVE COVER ON ALL AREAS NOT COVERED BY PERMANENT STRUCTURES, OR EQUIVALENT PERMANENT STABILIZATION MEASURES. PERMANENT COVER DOES NOT INCLUDE TEMPORARY BMPS SUCH AS WOOD FIBER BLANKET, MULCH, AND ROLLED EROSION CONTROL PRODUCTS. [MINN. R. 7090]

"PERMITTEES" MEANS THE PERSONS, FIRM, GOVERNMENTAL AGENCY, OR OTHER ENTITY IDENTIFIED AS THE OWNER AND OPERATOR ON THE APPLICATION SUBMITTED TO THE MPCA AND ARE RESPONSIBLE FOR COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT. [MINN. R. 7090]

"PROJECT(S)" MEANS ALL CONSTRUCTION ACTIVITY PLANNED AND/OR CONDUCTED UNDER A PARTICULAR PERMIT. THE PROJECT OCCURS ON THE SITE OR SITES DESCRIBED IN THE PERMIT APPLICATION, THE SWPPP AND IN THE ASSOCIATED PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS. [MINN. R. 7090]

"PUBLIC WATERS" MEANS ALL WATER BASINS AND WATERCOURSES DESCRIBED IN MINN. STAT. SECT. 103G.005 SUBP. 15. [MINN. R. 7090]

"SEDIMENT CONTROL" MEANS METHODS EMPLOYED TO PREVENT SUSPENDED SEDIMENT IN STORMWATER FROM LEAVING THE SITE (E.G. SILT FENCES, COMPOST LOGS AND STORM DRAIN INLET PROTECTION). [MINN. R. 7090]

"STABILIZE", "STABILIZED", "STABILIZATION" MEANS THE EXPOSED GROUND SURFACE HAS BEEN COVERED BY APPROPRIATE MATERIALS SUCH AS MULCH, STAKED SOD, RIPRAP, EROSION CONTROL BLANKET, MATS OR OTHER MATERIAL THAT PREVENTS EROSION FROM OCCURRING. GRASS SEEDING, AGRICULTURAL CROP SEEDING OR OTHER SEEDING ALONE IS NOT STABILIZATION. MULCH MATERIALS MUST ACHIEVE APPROXIMATELY 90 PERCENT GROUND COVERAGE (TYPICALLY 2 TON/ACRE). [MINN. R. 7090]

"STORMWATER" MEANS PRECIPITATION RUNOFF, STORMWATER RUNOFF, SNOWMELT RUNOFF, AND ANY OTHER SURFACE RUNOFF AND DRAINAGE. [MINN. R. 7090]

"STEEP SLOPES" MEANS SLOPES THAT ARE 1:3 (V:H) (33.3 PERCENT) OR STEEPER IN GRADE. [MINN. R. 7090]

"STORM WATER POLLUTION PREVENTION PLAN (SWPPP)" MEANS A PLAN FOR STORMWATER DISCHARGE THAT INCLUDES ALL REQUIRED CONTENT UNDER IN SECTION 5 THAT DESCRIBES THE EROSION PREVENTION, SEDIMENT CONTROL AND WASTE CONTROL BMPS AND PERMANENT STORMWATER TREATMENT SYSTEMS. [MINN. R. 7090]

"SURFACE WATER OR WATERS" MEANS ALL STREAMS, LAKES, PONDS, MARSHES, WETLANDS, RESERVOIRS, SPRINGS, RIVERS, DRAINAGE SYSTEMS, WATERWAYS, WATERCOURSES, AND IRRIGATION SYSTEMS WHETHER NATURAL OR ARTIFICIAL, PUBLIC OR PRIVATE, EXCEPT THAT SURFACE WATERS DO NOT INCLUDE STORMWATER TREATMENT SYSTEMS CONSTRUCTED FROM UPLAND. THIS PERMIT DOES NOT CONSIDER STORMWATER TREATMENT SYSTEMS CONSTRUCTED IN WETLANDS AND MITIGATED IN ACCORDANCE WITH SECTION 22 AS SURFACE WATERS. [MINN. R. 7090]

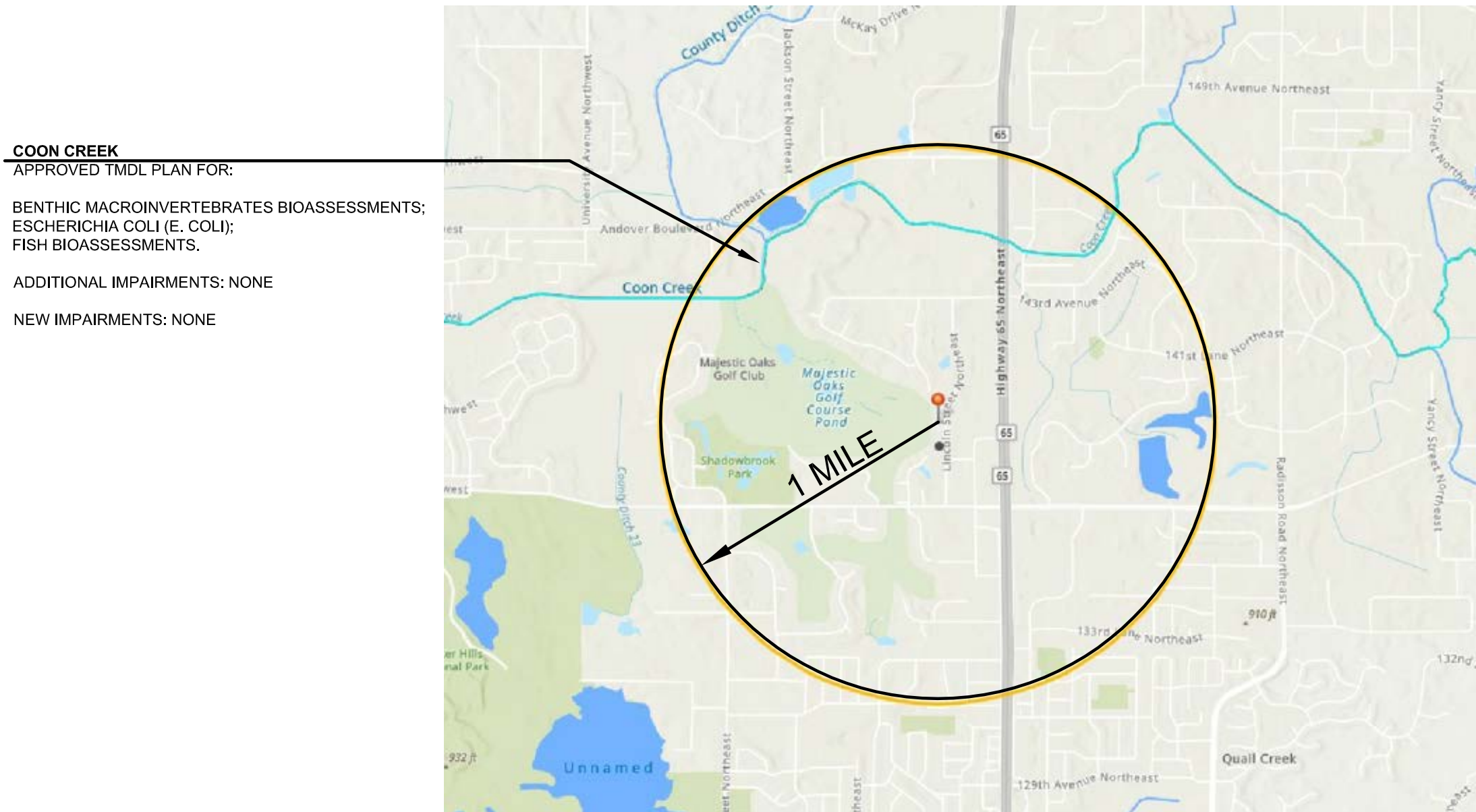
"WATERS OF THE STATE" (AS DEFINED IN MINN. STAT. SECT. 115.01, SUBP. 22) MEANS ALL STREAMS, LAKES, PONDS, MARSHES, WATERCOURSES, WATERWAYS, WELLS, SPRINGS, RESERVOIRS, AQUIFERS, IRRIGATION SYSTEMS, DRAINAGE SYSTEMS AND ALL OTHER BODIES OR ACCUMULATIONS OF WATER, SURFACE OR UNDERGROUND, NATURAL OR ARTIFICIAL, PUBLIC OR PRIVATE, WHICH ARE CONTAINED WITHIN, FLOW THROUGH, OR BORDER UPON THE STATE OR ANY PORTION THEREOF. [MINN. STAT. 115.01, SUBP. 22]

"WATER QUALITY VOLUME" MEANS ONE (1) INCH OF RUNOFF FROM THE NET INCREASE IN IMPERVIOUS SURFACES CREATED BY THE PROJECT (CALCULATED AS AN INSTANTANEOUS VOLUME). [MINN. R. 7090]

"WETLANDS" (AS DEFINED IN MINN. R. 7050.0186, SUBP. 1A.B.) MEANS THOSE AREAS THAT ARE INUNDATED OR SATURATED BY SURFACE WATER OR GROUNDWATER AT A FREQUENCY AND DURATION SUFFICIENT TO SUPPORT, AND UNDER NORMAL CIRCUMSTANCES DO SUPPORT, A PREVALENCE OF VEGETATION TYPICALLY ADAPTED FOR LIFE IN SATURATED SOIL CONDITIONS. WETLANDS GENERALLY INCLUDE SWAMPS, MARSHES, BOGS, AND SIMILAR AREAS. CONSTRUCTED WETLANDS DESIGNED FOR WASTEWATER TREATMENT ARE NOT WATERS OF THE STATE. WETLANDS MUST HAVE THE FOLLOWING ATTRIBUTES:

- 1. A PREDOMINANCE OF HYDRIC SOILS; AND
- 2. INUNDATED OR SATURATED BY SURFACE WATER OR GROUNDWATER AT A FREQUENCY AND DURATION SUFFICIENT TO SUPPORT A PREVALENCE OF HYDROPHYTIC VEGETATION TYPICALLY ADAPTED FOR LIFE IN A SATURATED SOIL CONDITION; AND
- 3. UNDER NORMAL CIRCUMSTANCES SUPPORT A PREVALENCE OF SUCH VEGETATION. [MINN. R. 7050.0186, SUBP. 1A.B.]

MAP OF SURFACE WATERS



COON CREEK
APPROVED TMDL PLAN FOR:
BENTHIC MACROINVERTEBRATES BIOASSESSMENTS;
ESCHERICHIA COLI (E. COLI);
FISH BIOASSESSMENTS.
ADDITIONAL IMPAIRMENTS: NONE
NEW IMPAIRMENTS: NONE

STORM WATER POLLUTION PREVENTION PLAN
ALLSTATE DISTRIBUTIONS COMMERCIAL BUILDING

DRAWN BY: M.Q.A. DESIGN BY: Q.M.A.
CHECKED BY: M.Q.A. PROJ. NO.: 24-2141

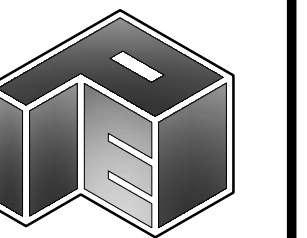
ORIGINAL DATE: MAY 3, 2024

REVISION DESCRIPTION table with columns: DATE, REVISION DESCRIPTION.

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
GASEM M. ABUGHAZLEH
LIC. NO.: 56289
DATE: 05.23.2024

ALLSTATE DISTRIBUTIONS
COMMERCIAL BUILDING
HAM LAKE, MINNESOTA
STORM WATER POLLUTION PREVENTION PLAN

PREPARED FOR:
GLEN HARSTAD



SITE PLANNING & ENGINEERING
PLOWE ENGINEERING, INC.
6776 LAKE DRIVE
SUITE 110
LINO LAKES, MN 55014
PHONE: (651) 361-8210
FAX: (651) 361-8701

C6.2

Permit Application Review Report
Date: 6/12/2024

Board Meeting Date: 6/17/2024
Agenda Item: 8

Applicant/Landowner:

City of Fridley
Attn: Nic Schmidt
7071 University Avenue NE
Fridley, MN 55432

Project Name: 2024 Neighborhood Parks Improvements (Logan Park)

Project PAN: P-24-023

Project Purpose: Park reconstruction including curb & walkways, sport court, fencing and various site amenities.

Project Location: 155 Logan Parkway NE, City of Fridley

Site Size: size of parcel - 2.72 acres; size of disturbed area - 0.75 acres; size of regulated impervious surface - 0.15

Applicable District Rule(s): Rule 2, Rule 3, Rule 4

Recommendation: Approve with 2 Conditions and 0 Stipulations

Description: The City of Fridley is proposing various park improvements including new grading, curb and sidewalks, sport courts and other site amenities at Logan Park. The project will disturb 0.75 acres and create 0.15 acres of regulated impervious. The project is within the Oak Glen Creek Subwatershed. However, the site drains to City storm sewer and then to the Mississippi River. The relevant water resource concerns are stormwater management and erosion and sediment control which correlate to District Rules 3 and 4. See attached Figure 1: Project Location and Figure 2: Site Plan.

Conditions to be Met Before Permit Issuance:

Rule 2.7 – Procedural Requirements

1. Submittal of a performance escrow in the amount of \$2,375.00.

Rule 4.0 – Soils and Erosion Control

2. Update the erosion and sediment control plan to stabilize soils and soil stockpiles within 7 days of inactivity.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit.

By accepting the permit, the applicant agrees to these stipulations:

Exhibits:

Exhibit Type	Exhibit Author	Signature Date	Received Date
Erosion & Sediment Control Plan	City of Fridley	03/28/2024	05/09/2024
MIDS Calculations	City of Fridley	04/22/2024	04/25/2024
Narrative	City of Fridley	05/21/2024	05/21/2024
Construction Plans	City of Fridley	03/28/2024	04/25/2024

Findings

Fees and Escrows (Rule 2.7):

The applicant is a government agency and is therefore exempt from an application fee or a review and inspection fee deposit. The applicant will be required to submit a performance escrow in the amount of \$2,375.00. This corresponds to a base escrow of \$2,000, plus an additional \$500/acre of disturbance (0.75 acres of land disturbance proposed).

Stormwater Management (Rule 3.0):

Rule 3.0 applies to the proposed project because it includes land disturbing activity that creates 5000 sf or more of new or fully reconstructed impervious surface for (non-residential/multifamily residential) development within one mile of and draining to an impaired water.

The Hydrologic Soil Group (HSG) of soils on site are HSG A.

Rate Control: Stormwater flow rate was not calculated as a part of this project. Any rate increase would be absorbed by City storm sewer which is routed directly to the Mississippi River. The City has approved this potential increase.

Volume Control: The proposed project is new development; therefore, the volume reduction requirement is equal to 1.1 inches over the area of all impervious surface. The amount of proposed impervious required to be treated is 6,534 ft².

The applicant is proposing the Stormwater Management Practices (SMPs) described below:

Drainage Area	Impervious required to be treated (ft ²)	Proposed SMP	TP Removal Factor	Required Water Quality Volume (ft ³)	Water Quality Volume Provided (ft ³)
Logan Pkwy	6,534	disconnected impervious	1	598	599
Totals:	6,534			598	599

Table 2.

The volume control standard has been met as shown in Table 2.

Water Quality: The total Water Quality Volume has been provided in aggregate.

Stormwater treatment on site must remove at least 80% of the average annual post development TSS per discharge location. The following TSS removal has been provided:

Discharge Point	TSS Removal Provided
Logan Pkwy	92

Table 3.

The TSS removal standard is met at each discharge point as shown in Table 3.

Discharges to Wetlands: Stormwater from the proposed project is not being discharged into any wetlands, therefore this section does not apply.

Landlocked Basins: The proposed drainage system does not outlet to a landlocked basin, therefore this section does not apply.

Low Floor Freeboard: The proposed project is not considered new development with buildings and habitable structures; therefore, this section does not apply.

Maintenance:

Access: Sufficient maintenance access has been provided on the plans for all stormwater management practices.

Soils and Erosion Control (Rule 4.0)

Rule 4.0 applies to the proposed project because it is a land disturbing activity that requires a permit under another District rule.

The proposed project drains to the Mississippi River. The soils affected by the project include Urban Zimmerman and do not have a soil erodibility factor of 0.15 or greater. Disturbed areas are not proposed to be stabilized within 7 days, as required. The proposed erosion and sediment control plan includes perimeter control, construction exit, inlet protection, and street sweeping. The erosion control plan does not meet District requirements because soils and soil stockpiles are not proposed to be stabilized within 7 days of inactivity. See attached Figure 3: Erosion and Sediment Control Plan.

Wetlands (Rule 5.0)

The proposed project does not include activities which result in the filling, draining, excavating, or otherwise altering the hydrology of a wetland. Rule 5.0 does not apply.

Floodplain (Rule 6.0)

The proposed project does not include land disturbing activities within the floodplain as mapped and modeled by the District. Rule 6.0 does not apply.

Drainage, Bridges, Culverts, and Utility Crossings (Rule 7.0)

The proposed project does not include land disturbing activities which construct, improve, repair, or alter the hydraulic characteristics of a bridge profile control or culvert structure on a creek, public ditch, or major watercourse. The proposed project does not include land disturbing activities which involve a pipeline or utility crossing of a creek, public ditch, or major watercourse.

The proposed project does not include land disturbing activities which construct, improve, repair or alter the hydraulic characteristics of a conveyance system that extends across two or more parcels of record not under common ownership and has a drainage area of 200 acres or greater. Rule 7.0 does not apply.

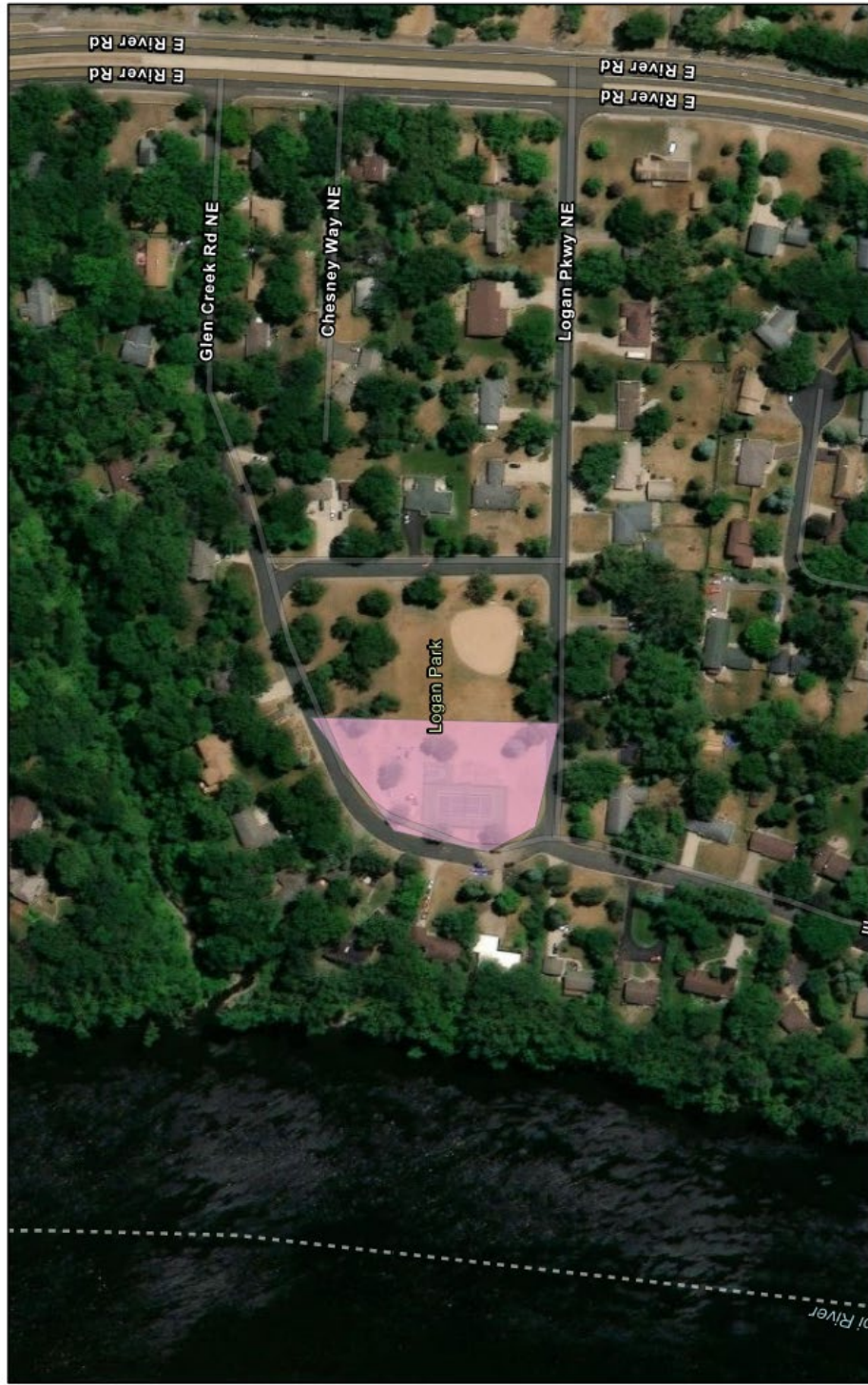
Buffers (Rule 8.0)

The proposed project does not include a land disturbing activity on land adjacent or directly contributing to a Public Water, Additional Waters, High or Outstanding Ecological Value Waters, a Public Ditch, or Impaired Waters/waters exceeding state water quality standards. Rule 8.0 does not apply.

Variances (Rule 10.2)

The proposed project is not requesting a variance from the District's rules, regulations, and policies. Rule 10.2 does not apply.

P-24-023



5/31/2024

Figure 1: Project Location

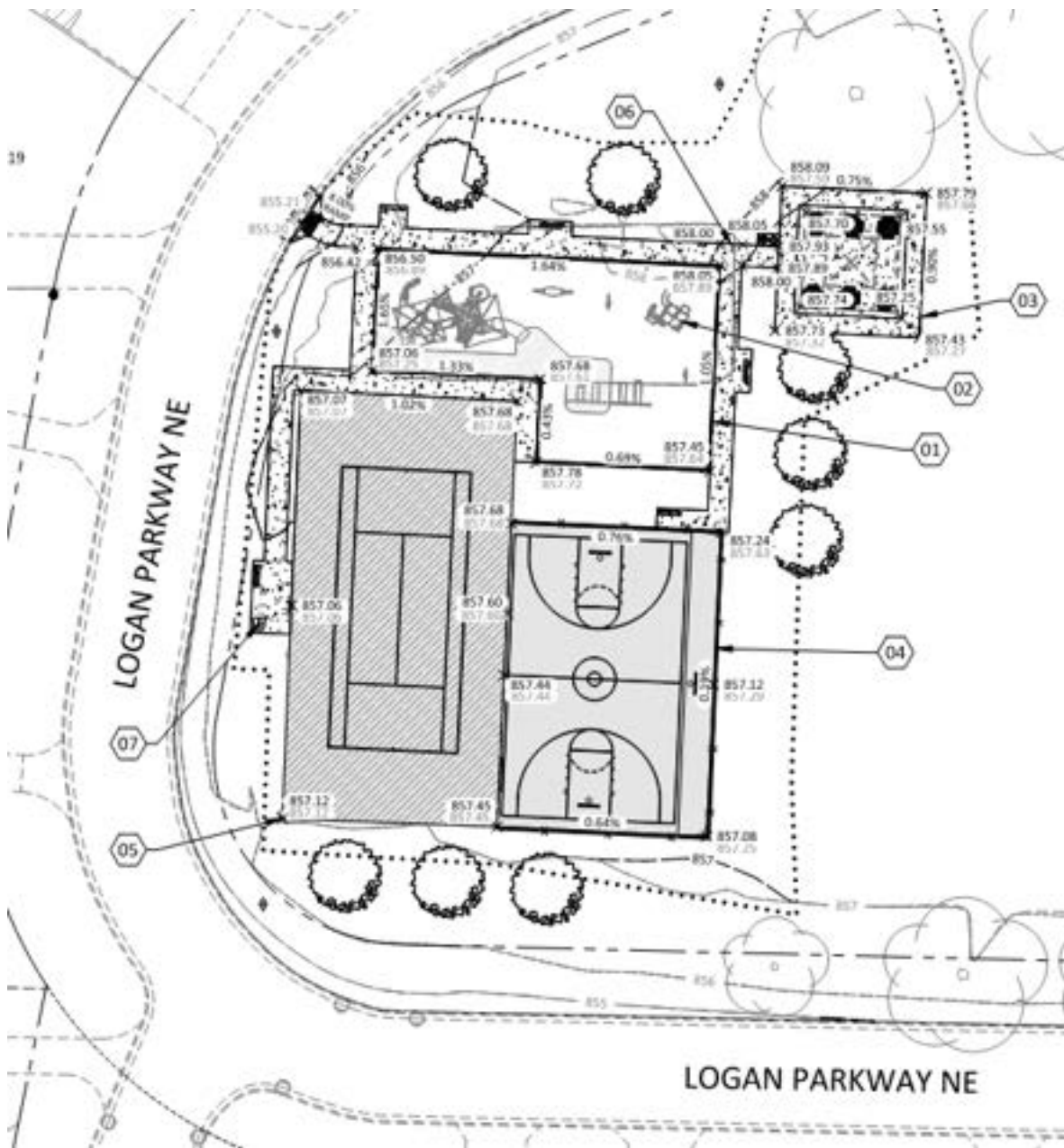


Figure 2: Site Plan

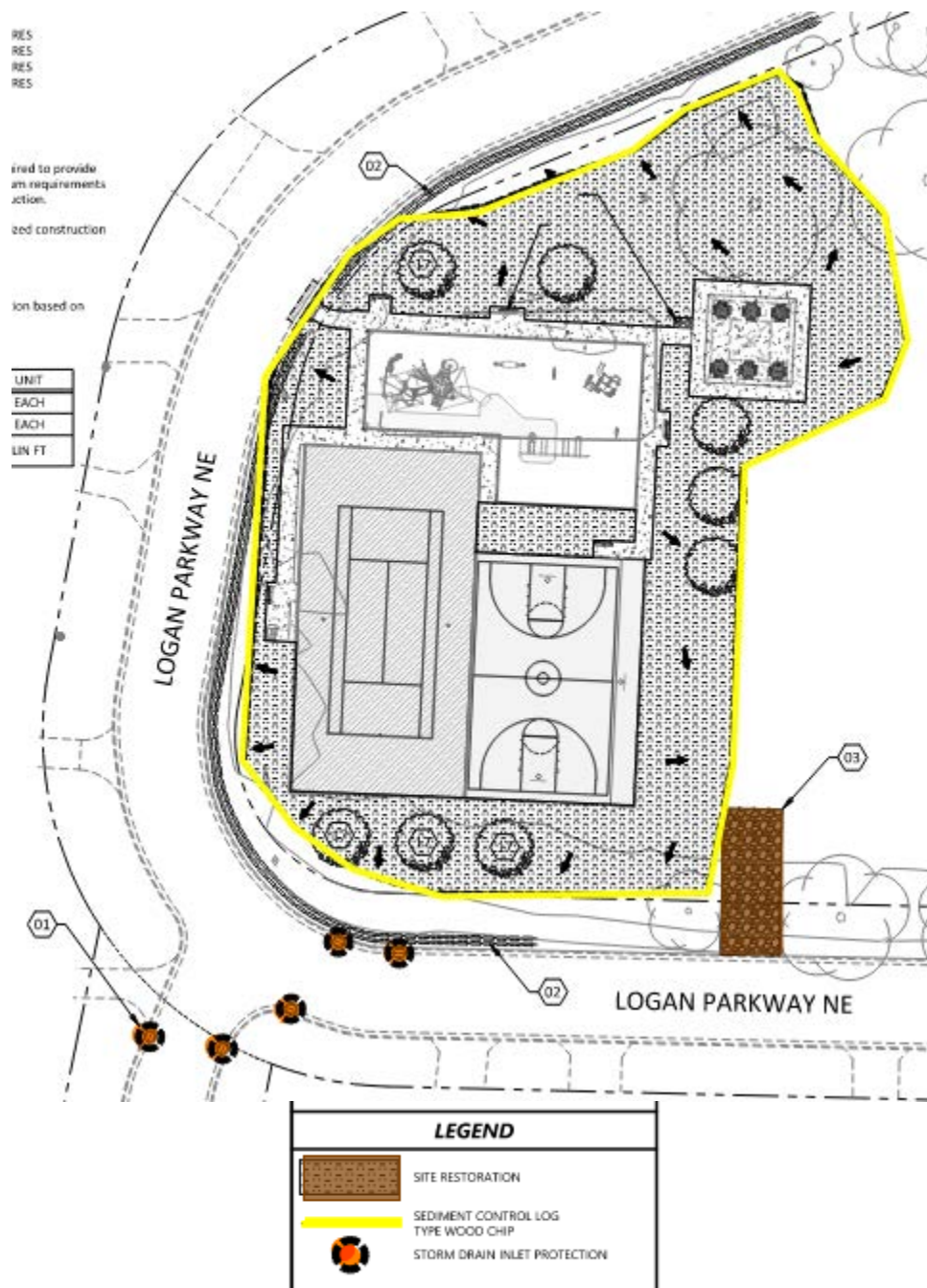


Figure 3: Erosion and Sediment Control Plan

CITY OF FRIDLEY CONSTRUCTION PLANS FOR 2024 NEIGHBORHOOD PARKS IMPROVEMENTS CITY PROJECT NO. 24-70457

EDGEWATER GARDENS, PLYMOUTH SQUARE, AND LOGAN
REMOVALS, GRADING, CONCRETE CURB & WALKWAYS, BITUMINOUS SPORT COURTS, FENCE, SITE AMENITIES, RESTORATION

--- GOVERNING SPECIFICATIONS ---
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATION FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM AND BE INSTALLED IN ACCORDANCE
WITH THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD) AND
PART VI, "FIELD MANUAL" FOR TEMPORARY TRAFFIC CONTROL DEVICES.

SHEET NUMBER	SHEET TITLE
GENERAL	
1	TITLE SHEET
2	LEGEND
3	GENERAL NOTES
4	STATEMENT OF ESTIMATED QUANTITIES
CIVIL	
5-6	EDGEWATER GARDENS - EXISTING CONDITIONS AND REMOVALS PLAN
7	EDGEWATER GARDENS - GRADING PLAN
8	EDGEWATER GARDENS - SITE PLAN
9	PLYMOUTH SQUARE - EXISTING CONDITIONS AND REMOVALS PLAN
10	PLYMOUTH SQUARE - GRADING PLAN
11	PLYMOUTH SQUARE - SITE PLAN
12	LOGAN - EXISTING CONDITIONS AND REMOVALS PLAN
13	LOGAN - GRADING PLAN
14	LOGAN - SITE PLAN
15-21	ENLARGED PLANS AND DETAILS
22	STANDARD PLANS AND DETAIL PLATES

THIS PLAN SET CONTAINS 22 SHEETS.

VICINITY MAP

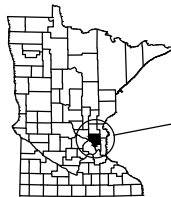


PROJECT LOCATION: LOGAN
155 LOGAN PARKWAY NE

PROJECT LOCATION: EDGEWATER GARDENS
138 CREEK PARK LANE

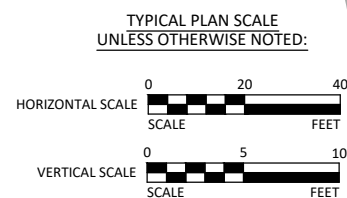
PROJECT LOCATION: PLYMOUTH SQUARE
4801 MAIN STREET NE

PROJECT LOCATION



CITY: FRIDLEY
COUNTY: ANOKA
DISTRICT: METRO

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



PROJECT DATUM
HORIZONTAL: ANOKA COUNTY (2011)
VERTICAL: NAVD88

RECORD DRAWING INFORMATION	
OBSERVER:	
CONTRACTOR:	
DATE:	



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
NRS			
DRAWN			
JBQ			
CHECKED			
BJB			
CLIENT PROJ. NO.			

NEIGHBORHOOD PARKS IMPROVEMENTS
PROJECT NO. 24-70457
TITLE SHEET

SHEET
1
OF
22

D:\Engineer\Projects\2024\Park System Improvement\Plan\24-70457 - Combined N. Parks\Design\Drawings\Sheets\24-70457 - G001.dwg 3/28/2024 4:30:05 PM

EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGNAL CONTROL CABINET
	BARRICADE PERMANENT		SOIL BORING
	BASKETBALL POST		SIREN
	BENCH		TELEPHONE BOOTH
	BIRD FEEDER		TILE INLET
	BOLLARD		TILE OUTLET
	BUSH		TILE RISER
	CATCH BASIN RECTANGULAR CASTING		TRANSFORMER-ELECTRIC
	CATCH BASIN CIRCULAR CASTING		TREE-CONIFEROUS
	CURB STOP		TREE-DECIDUOUS
	CLEAN OUT		TREE STUMP
	CULVERT END		TRAFFIC ARM BARRIER
	DRINKING FOUNTAIN		TRAFFIC SIGNAL
	DOWN SPOUT		TRASH CAN
	FILL PIPE		UTILITY MARKER
	FIRE HYDRANT		VALVE
	FLAG POLE		VALVE POST INDICATOR
	FLARED END / APRON		VALVE VAULT
	FUEL PUMP		VENT PIPE
	GRILL		WATER SPIGOT
	GUY WIRE ANCHOR		WELL
	HANDHOLE		WETLAND DELINEATED MARKER
	HANDICAP SPACE		WETLAND
	IRRIGATION SPRINKLER HEAD		WET WELL
	IRRIGATION VALVE BOX		YARD HYDRANT
	LIFT STATION CONTROL PANEL		
	LIFT STATION		
	LIGHT ON POLE		
	LIGHT-GROUND		
	MAILBOX		
	MANHOLE-COMMUNICATION		
	MANHOLE-ELECTRIC		
	MANHOLE-GAS		
	MANHOLE-HEAT		
	MANHOLE-SANITARY SEWER		
	MANHOLE-STORM SEWER		
	MANHOLE-UTILITY		
	MANHOLE-WATER		
	METER		
	ORDER MICROPHONE		
	PARKING METER		
	PAVEMENT MARKING		
	PEDESTAL-COMMUNICATION		
	PEDESTAL-ELECTRIC		
	PEDESTRIAN PUSH BUTTON		
	PICNIC TABLE		
	POLE-UTILITY		
	POST		
	RAILROAD SIGNAL POLE		

PROPOSED TOPOGRAPHIC SYMBOLS

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS

SURVEY SYMBOLS

	BENCH MARK LOCATION
	CONTROL POINT
	MONUMENT IRON FOUND
	CAST IRON MONUMENT

EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE

SURVEY LINES

	CONTROLLED ACCESS BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

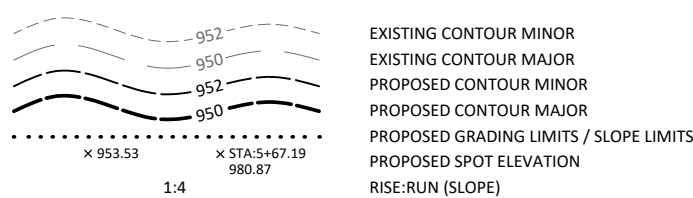
EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING

GRADING INFORMATION



HATCH PATTERNS

	BITUMINOUS		GRAVEL
	CONCRETE		

EXISTING PRIVATE UTILITY LINES

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL:

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-02.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HOPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

I:\Engineer\Projects\2024\Park System Improvement Plan\24-70457 - Combined N Parks\Design\Drawings\Sheets\24-70457_0002.dwg 3/28/2024 4:30:15 PM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Brandon J. Brodhag
BRANDON J. BRODHAG
LIC. NO. 59297 DATE 03/28/2024



DESIGNED	NRS	NO.	ISSUED FOR	DATE
DRAWN	JBQ			
CHECKED	BJB			
CLIENT PROJ. NO.				

NEIGHBORHOOD PARKS IMPROVEMENTS

PROJECT NO. 24-70457

LEGEND

SHEET 2 OF 22

CONTRACT ADMINISTRATION

- The Contractor shall notify the engineer in writing 48 hours prior to commencing work on any project item. Notification shall be given per project and per item.
- The Contractor shall provide names and contact information of the Project Manager, Superintendent and Twenty-four Hour Emergency Response contact assigned to the project prior to commencing work.
- The Superintendent shall be on site during all utility installation, reclaim, and paving operations.
- If the Superintendent leaves the site, The Contractor shall designate a responsible representative capable of being on site within one-hour, contact information of the representative shall be provided to the Inspector 48 hours prior to Superintendent leaving site.
- A Project Schedule showing project phasing, intermediate project deadlines, anticipated substantial completion and final completion shall be submitted by the Contractor at the Pre-Construction meeting.
- The Project Manager and Superintendent shall schedule and attend a meeting once a week in the office of the City Engineer to discuss project schedule, progress, and issues.
- A report of work completed the previous week, work scheduled to be completed the current week, and any change to the overall schedule or cost shall be submitted at each weekly project meeting. See Specifications.
- All work shall conform with local ordinances, laws and rules.

PROJECT REPRESENTATIVE: NIC SCHMIDT, Engineering 763-572-3556

HOURS OF OPERATION

- Hours of work are limited to 7:00 am to 7:00 pm Monday through Friday, and 9:00 am to 7:00 pm on Saturdays, unless otherwise approved by the Engineer.

UTILITIES

- The subsurface utility information in this plan is Utility Level "D". This Utility level was determined according to the guidelines of CI/ASCE 38-02, "Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data".
- The contractor is responsible for locating and protecting all existing utilities. The Contractor shall arrange locates with Gopher State One Call prior to the start of any excavation. Below are contacts for the major utilities related to this project:

a. Gopher State One Call	800-252-1166	Emergency Call 811
b. Centerpoint Energy	612-321-5502	Emergency 888-944-4564
c. Xcel Energy	612-630-4568	Emergency 800-895-1999
d. Century Link	612-998-1920	
- In the event of an emergency related to utilities on the project Call 811. In the event of an accident or personal injury Call 911. Upon control of the emergency situation, the contractor shall contact the City within one hour of the incident. A full detailed incident report must be submitted to the Project Engineer within seven (7) days of the event.

CITY OWNED WATER

- No water service shut-downs will be allowed for longer than 96 hours unless approved by the Engineer. See Specifications.
- Water service shut down requests must be submitted in writing 72 hours before the planned shutdown.
- Water will be available from a hydrant identified by the Engineer for the project. A meter is available through the City of Fridley and a security deposit will be submitted by the Contractor. See Specifications.

STAGING

- The City will assist in identifying potential staging sites upon request, the Contractor shall be responsible to negotiate the use of these areas. See Specifications.
- The Contractor is responsible to propose a staging area for the work. No additional storage of equipment or materials will be allowed outside of city Right of Way.

NON-CITY OWNED FACILITIES

- All non-City of Fridley manhole castings must be salvaged and replaced. Castings shall be adjusted to match the final road surface prior to paving the bituminous wear course.
- Metropolitan Council may provide new castings for the MCEs manhole structures. If new castings are not available at the time of paving, the existing castings will be replaced on each structure.

RESIDENTIAL NOTICES & SERVICES

- The City will notify the residents of the start of work, and final completion. Coordination of all other notifications is the responsibility of the Contractor. See Specifications.
- The Contractor shall notify residents, and City of Fridley Water Department, of water shut-offs or installation of temporary water service for their property at least 72 hours before the shut-down.
- The Contractor shall notify the residents of work scheduled in each phase of the project.
- Prior to starting work on a block, the Contractor shall hand deliver a notice to each property stating the starting date of the work, the dates of closure of the street, the planned date for paving, and expected date of final completion in that area.
- Any work that will prevent residents from reaching their driveway requires a minimum of 72 hours notice before the work begins.
- If the contractor is to do any work outside of City Right of Way, the Contractor must obtain a written agreement with the property owner and submit agreement to The Engineer prior to the start of the work.
- The Contractor shall provide access for mail delivery, garbage collection, and bus service. Any time this access will not be available, the Contractor will provide temporary facilities, and insure service to the residents.

- If access to garbage and recycling trucks will not be available to an area, the Contractor shall move all waste containers to the nearest end of block before 7:00am, and return them to the respective property before the end of the day.
- The Contractor will notify The Engineer immediately and respond to Resident complaints within one (1) hour of notification of the complaint. This will include access issues, damage to property, interruption of service, general questions, or others.

LANDSCAPING, TOPSOIL, EROSION CONTROL

- The Contractor is responsible for protecting all trees and landscaping in the limits of construction, and of adjacent properties. Protection of landscaping shall be incidental to the work.
- Any tree adjacent to the work requiring trimming to prevent damage to the tree will be done prior to the work, and will be incidental to the work.
- All inlet protection and silt fence must be in place prior to the start of the work.
- Restoration of all boulevards and other project areas must be completed within 7 days of cessation of work in the area, and prior to paving the wear course bituminous surface.

TRAFFIC CONTROL

- The Contractor shall prepare a traffic control plan showing all signage for the project and detours required as a part of the project. The traffic control plan must be approved by the Engineer prior to any work in the project area.
- The Contractor will be responsible for maintaining all traffic control during the project, and will be required to make changes if required.
- All traffic control signage shall be removed within seven (7) days of completion of paving. See Specifications.

CONSTRUCTION STAKING

- Staking - The Agency will provide one set of construction stakes for utilities and curb at the discretion of the Engineer.
- The Contractor must request staking a minimum of 48 hours in advance.
- The Contractor will be responsible for protection of the stakes, and any re-staking if needed. See Specifications.

I:\Engineer\Projects\2024\Park System Improvement Plan\24-70457 - Combined N. Parks\Design\Drawings\Sheets\24-70457_6003.dwg 3/28/2024 4:30:23 PM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Brandon J. Brodhag
 BRANDON J. BRODHAG
 LIC. NO. 59297 DATE 03/28/2024



DESIGNED	NO.	ISSUED FOR	DATE
NRS			
DRAWN			
JBQ			
CHECKED			
BJB			
CLIENT PROJ. NO.			

NEIGHBORHOOD PARKS IMPROVEMENTS
 PROJECT NO. 24-70457
 GENERAL NOTES

SEQ.	DESCRIPTION	UNITS	QTY
SCHEDULE A - EDGEWATER GARDENS PARK			
1	MOBILIZATION	LUMP SUM	1
2	CLEAR & GRUB TREE (UP TO 24" DIA.)	EACH	5
3	CLEAR & GRUB TREE (GREATER THAN 24" DIA.)	EACH	1
4	SAWING BITUMINOUS PAVEMENT	LIN FT	79
5	REMOVE BITUMINOUS PAVEMENT	SQ YD	161
6	REMOVE SIDEWALK PAVEMENT	SQ YD	39
7	REMOVE CURB AND GUTTER	LIN FT	15
8	REMOVE FENCE	LF	50
9	REMOVE LANDSCAPING BLOCK	LIN FT	36
10	REMOVE PLAYGROUND CONTAINER CURB	LIN FT	365
11	REMOVE PLAYGROUND FILL - 1 FT DEPTH	CU YD	223
12	REMOVE PLAYGROUND PIP SURFACE	SQ YD	28
13	REMOVE PLAYGROUND EQUIPMENT	LUMP SUM	1
14	REMOVE TRASH RECEPTACLE	EACH	2
15	REMOVE BENCH	EACH	2
16	REMOVE BASKETBALL GOAL	EACH	2
17	REMOVE TENNIS NET POST	EACH	2
18	SALVAGE SIGN	EACH	3
19	SITE GRADING	LUMP SUM	1
20	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	15
21	4" CONCRETE WALK & PADS	SQ FT	4,994
22	TRUNCATED DOMES	SQ FT	12
23	BASKETBALL COURT AND GOALS (COMPLETE)	LUMP SUM	1
24	MODIFY SPORT COURT (PICKLEBALL COMPLETE)	LUMP SUM	1
25	INSTALL OWNER-FURNISHED 18'X18' SHELTER INCL. FOOTINGS	LUMP SUM	1
26	INSTALL OWNER-FURNISHED PARK SIGN	EACH	1
27	INSTALL OWNER-FURNISHED PICNIC TABLE	EACH	4
28	INSTALL OWNER-FURNISHED BENCH	EACH	7
29	INSTALL OWNER-FURNISHED BIKE REPAIR STATION	EACH	1
30	INSTALL OWNER-FURNISHED BIKE RACK	EACH	2
31	FURNISH & INSTALL FENCE - 10 FT HIGH	LIN FT	232
32	FURNISH & INSTALL FENCE - 4 FT HIGH	LIN FT	38
33	INLET PROTECTION	EACH	3
34	SITE RESTORATION	LUMP SUM	1

SEQ.	DESCRIPTION	UNITS	QTY
SCHEDULE C - LOGAN PARK			
65	MOBILIZATION	LUMP SUM	1
66	CLEAR & GRUB TREE (UP TO 24" DIA.)	EACH	9
67	SAWING BITUMINOUS PAVEMENT	LIN FT	127
68	REMOVE BITUMINOUS PAVEMENT	SQ YD	245
69	REMOVE SIDEWALK PAVEMENT	SQ YD	93
70	REMOVE CURB AND GUTTER	LIN FT	16
71	REMOVE PLAYGROUND CONTAINER CURB	LIN FT	250
72	REMOVE PLAYGROUND FILL - 1 FT DEPTH	CU YD	138
73	REMOVE PLAYGROUND PIP SURFACE	SQ YD	15
74	REMOVE PLAYGROUND EQUIPMENT	LUMP SUM	1
75	REMOVE TRASH RECEPTACLE	EACH	2
76	REMOVE BENCH	EACH	3
77	REMOVE BASKETBALL GOAL	EACH	1
78	SALVAGE SIGN	EACH	1
79	REMOVE SHELTER	LUMP SUM	1
80	SALVAGE GRILL	EACH	2
81	SITE GRADING	LUMP SUM	1
82	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	16
83	4" CONCRETE WALK & PADS	SQ FT	4,367
84	TRUNCATED DOMES	SQ FT	12
85	BASKETBALL COURT AND GOALS (COMPLETE)	LUMP SUM	1
86	MODIFY SPORT COURT (TENNIS COURT COMPLETE)	LUMP SUM	1
87	INSTALL OWNER-FURNISHED 30'X30' SHELTER INCL. FOOTINGS	LUMP SUM	1
88	INSTALL OWNER-FURNISHED PARK SIGN	EACH	1
89	INSTALL OWNER-FURNISHED PICNIC TABLE	EACH	6
90	INSTALL OWNER-FURNISHED BENCH	EACH	4
91	INSTALL OWNER-FURNISHED BIKE RACK	EACH	1
92	FURNISH & INSTALL FENCE - 10 FT HIGH	LIN FT	202
93	MODIFY FENCE	LUMP SUM	1
94	INLET PROTECTION	EACH	5
95	SITE RESTORATION	LUMP SUM	1

SEQ.	DESCRIPTION	UNITS	QTY
SCHEDULE B - PLYMOUTH SQUARE PARK			
35	MOBILIZATION	LUMP SUM	1
36	CLEAR & GRUB TREE (UP TO 24" DIA.)	EACH	2
37	SAWING BITUMINOUS PAVEMENT	LIN FT	41
38	REMOVE BITUMINOUS PAVEMENT	SQ YD	216
39	REMOVE SIDEWALK PAVEMENT	SQ YD	96
40	REMOVE CURB AND GUTTER	LIN FT	33
41	REMOVE FENCE	LIN FT	83
42	REMOVE PLAYGROUND CONTAINER CURB	LIN FT	310
43	REMOVE PLAYGROUND FILL - 1 FT DEPTH	CU YD	147
44	REMOVE PLAYGROUND PIP SURFACE	SQ YD	10
45	REMOVE PLAYGROUND EQUIPMENT	LUMP SUM	1
46	REMOVE TRASH RECEPTACLE	EACH	1
47	REMOVE BENCH	EACH	4
48	REMOVE BASKETBALL GOAL	EACH	2
49	SALVAGE SIGN	EACH	1
50	SITE GRADING	LUMP SUM	1
51	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	33
52	4" CONCRETE WALK & PADS	SQ FT	3,066
53	TRUNCATED DOMES	SQ FT	24
54	BASKETBALL COURT AND GOALS (COMPLETE)	LUMP SUM	1
55	PICKLEBALL COURT (COMPLETE)	LUMP SUM	1
56	INSTALL OWNER-FURNISHED 18'X18' SHELTER INCL. FOOTINGS	LUMP SUM	1
57	INSTALL OWNER-FURNISHED PARK SIGN	EACH	1
58	INSTALL OWNER-FURNISHED PICNIC TABLE	EACH	4
59	INSTALL OWNER-FURNISHED BENCH	EACH	6
60	INSTALL OWNER-FURNISHED BIKE RACK	EACH	1
61	FURNISH & INSTALL FENCE - 8 FT HIGH	LIN FT	198
62	ORNAMENTAL FENCE	LIN FT	220
63	INLET PROTECTION	EACH	11
64	SITE RESTORATION	LUMP SUM	1

BASIS FOR ESTIMATED QUANTITIES		A
BID ITEM	BASIS	
TYPE SP WEARING & NON-WEARING COURSE MIX	113 LBS/SQ/IN	
AGGREGATE BASE CLASS 5	105 LBS/SQ/IN	
HYDRAULIC BONDED FIBER MATRIX	3500 LBS/ACRE	
FERTILIZER TYPE 3	300 LBS/ACRE	
SEED MIX 35-241	55 LBS/ACRE	
SEED MIX 25-151	180 LBS/ACRE	

I:\Engineer\Projects\2024\Park System Improvement Plan\24-70457 - Combined N Parks\Design\Drawings\Sheets\24-70457 - G101.dwg 3/28/2024 4:30:33 PM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Brandon J. Brodhag
 BRANDON J. BRODHAG
 LIC. NO. 59297 DATE 03/28/2024



7071 University Avenue NE
 Fridley, MN 55432










DESIGNED	NO.	ISSUED FOR	DATE
NRS			
DRAWN			
JBQ			
CHECKED			
BJB			
CLIENT PROJ. NO.			

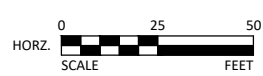
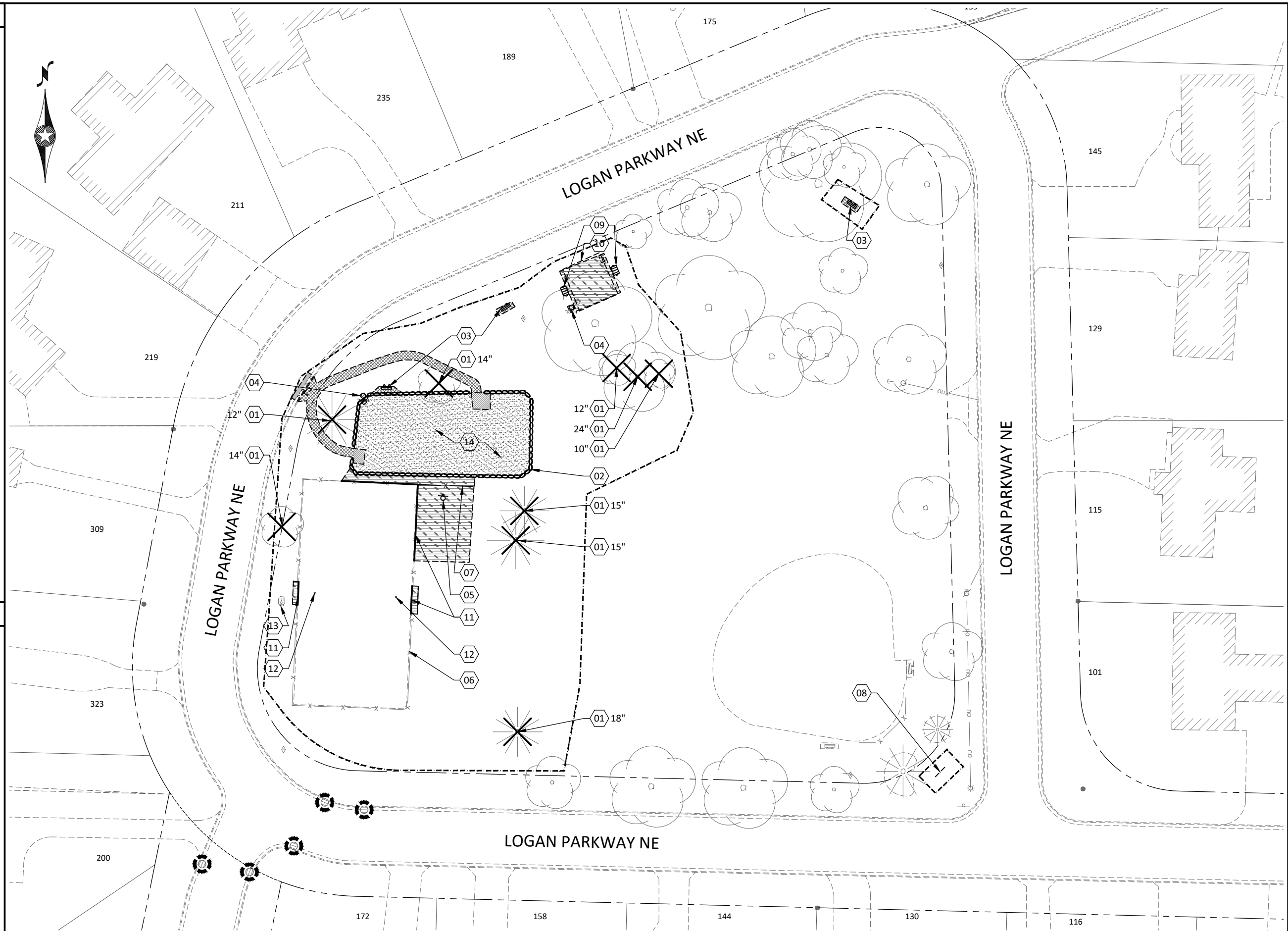
NEIGHBORHOOD PARKS IMPROVEMENTS
 PROJECT NO. 24-70457
 STATEMENT OF ESTIMATED QUANTITIES

KEYNOTES

- 01 CLEAR AND GRUB TREE. APPROXIMATE TREE SIZE NOTED.
- 02 REMOVE EXISTING WOOD PLAYGROUND CONTAINER CURB
- 03 REMOVE EXISTING BENCH
- 04 REMOVE EXISTING TRASH RECEPTACLE
- 05 REMOVE EXISTING BASKETBALL GOALS AND FOOTINGS
- 06 EXISTING FENCING AT PERIMETER OF TENNIS COURT TO REMAIN. PROTECT FROM DAMAGE. SEE SHEET 14 FOR ADDITIONAL INFORMATION.
- 07 REMOVE FENCING AT BASKETBALL COURT
- 08 SALVAGE EXISTING PARK SIGNAGE
- 09 SALVAGE EXISTING GRILL
- 10 REMOVE SHELTER
- 11 SAWCUT PAVEMENT AT LIMITS OF REMOVAL. PROTECT TENNIS COURT TO REMAIN.
- 12 TENNIS COURT NET POSTS TO REMAIN. PROTECT IN PLACE.
- 13 EXISTING DRINKING FOUNTAIN TO REMAIN. PROTECT IN PLACE.
- 14 REMOVE EXISTING PLAYGROUND EQUIPMENT

LEGEND

-  REMOVE PIP RUBBER
-  REMOVE 4" CONCRETE SIDEWALK/PADS
-  REMOVE SAND
-  REMOVE BASKETBALL COURT / BITUMINOUS
-  REMOVE BITUMINOUS (FULL DEPTH) AS REQUIRED FOR CURB REMOVAL
-  STORM DRAIN INLET PROTECTION
-  REMOVE CONCRETE CURB & GUTTER
-  CLEAR AND GRUB TREE (SIZE AS NOTED)
-  CONSTRUCTION LIMITS



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Brandon J. Brodhag
 BRANDON J. BRODHAG
 LIC. NO. 59297 DATE 03/28/2024



DESIGNED	NO.	ISSUED FOR	DATE
NRS			
DRAWN	JBQ		
CHECKED	BJB		
CLIENT PROJ. NO.			

NEIGHBORHOOD PARKS IMPROVEMENTS: LOGAN PARK
 PROJECT NO. 24-70457
 EXISTING CONDITIONS AND REMOVALS PLAN

SHEET
 12
 OF
 22

I:\Engineer\Projects\2024\Park System Improvement\Plan\24-707-Logan Park\Design\Drawings\Sheets\24-707-0001.dwg 3/28/2024 4:35:22 PM

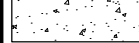






KEYNOTES

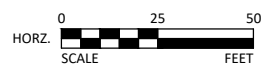
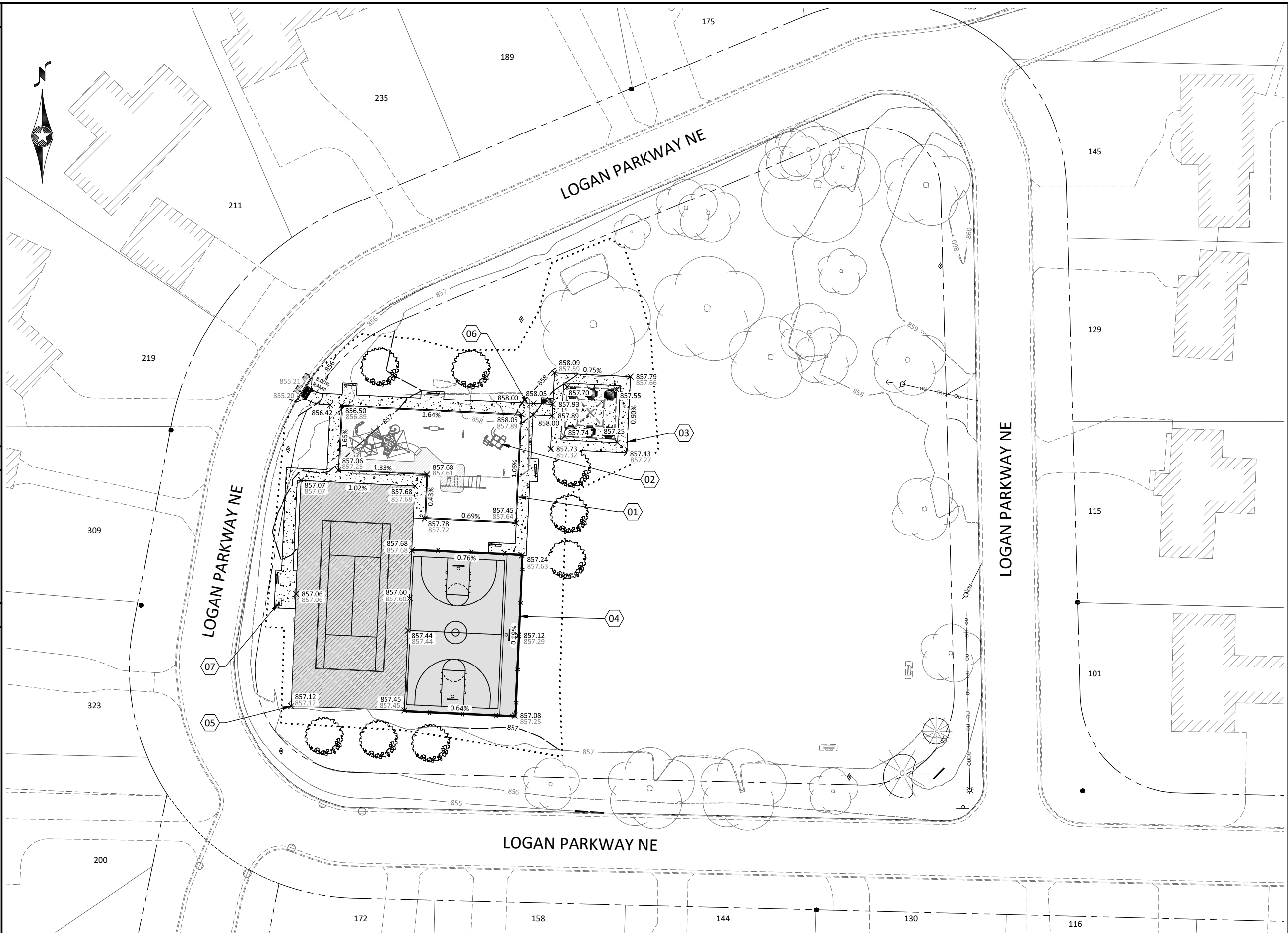
- 01 CONCRETE CONTAINER CURB AND PLAY SURFACES (BY OTHERS)
- 02 PLAY EQUIPMENT (BY OTHERS)
- 03 CONCRETE PAD WITH FOOTINGS AS REQUIRED FOR 30' X 30' SHELTER INSTALLATION - SEE SHEET 21
- 04 BASKETBALL COURT - SEE SHEET 15
- 05 EXISTING TENNIS COURT AND PERIMETER FENCING TO REMAIN. COURT TO BE RESURFACED. SEE SHEET 19
- 06 TRANSITION PANEL
- 07 EXISTING WATER FOUNTAIN CONCRETE PAD

EARTHWORK

QUANTITIES BELOW TO BE USED FOR "SITE GRADING" BID ITEM:
 ESTIMATED CUT = 421 CY
 ESTIMATED FILL = 66 CY
 NOTE: QUANTITIES ABOVE DO NOT INCLUDE "REMOVE PLAYGROUND FILL - 1 FOOT DEPTH" BID ITEM

LEGEND

-  CONCRETE SIDEWALK/PAD
-  TENNIS / PICKLEBALL COURT
-  BASKETBALL COURT SEE SHEET 15
-  PIP RUBBER (BY OTHERS)
-  BITUMINOUS PATCH - MATCH ADJACENT BASE AND PAVEMENT COURSING
-  CONCRETE CURB & GUTTER
-  GRADING LIMIT



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Brandon J. Brodhag
 BRANDON J. BRODHAG
 LIC. NO. 59297 DATE 03/28/2024



DESIGNED	NO.	ISSUED FOR	DATE
NRS			
DRAWN			
JBQ			
CHECKED			
BJB			
CLIENT PROJ. NO.			

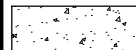
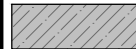



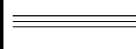

NEIGHBORHOOD PARKS IMPROVEMENTS: LOGAN PARK
 PROJECT NO. 24-70457
 GRADING PLAN

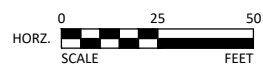
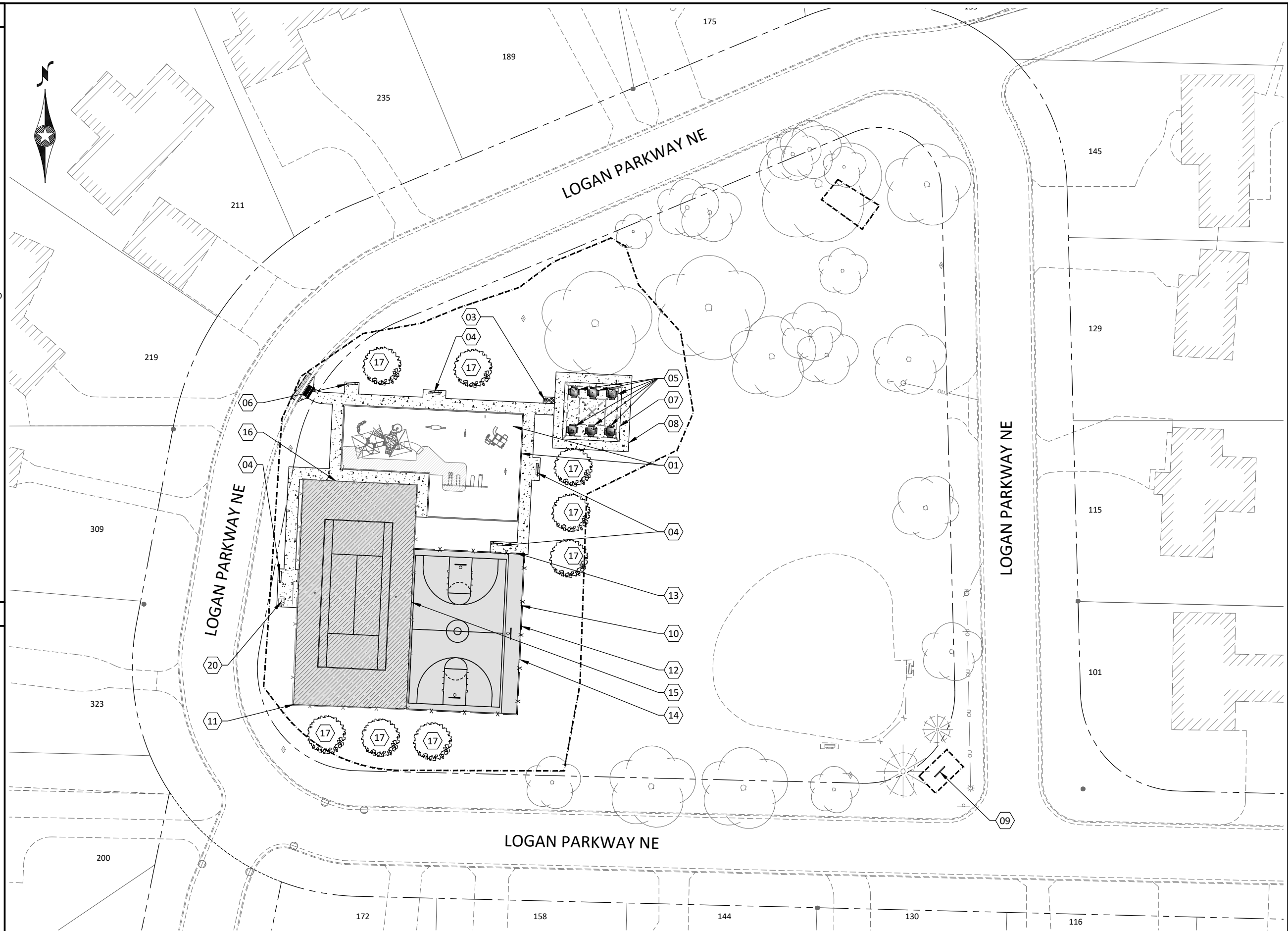
I:\Engineer\Projects\2024\2024 Park System Improvement\Plan\24-707 - Logan Park\Design\Drawings\Sheets\24-707_C301.dwg 3/28/2024 4:35:52 PM

KEYNOTES

- 01 CONCRETE CONTAINER CURB AND PLAY SURFACES (BY OTHERS)
- 02 PLAY EQUIPMENT (BY OTHERS)
- 03 TRASH/RECYCLING
- 04 INSTALL OWNER FURNISHED BENCH
- 05 INSTALL OWNER FURNISHED PICNIC TABLE
- 06 INSTALL OWNER FURNISHED BIKE RACK
- 07 INSTALL OWNER FURNISHED 30' X 30' SHELTER
- 08 CONCRETE PAD WITH FOOTINGS AS REQUIRED FOR SHELTER INSTALLATION - SEE SHEET 21
- 09 INSTALL OWNER FURNISHED SIGNAGE WITH POSTS (7'-6" WIDE W/ 6" POSTS) DIRECT BURY 3'-0" DEEP
- 10 BASKETBALL COURT - SEE SHEET 15
- 11 EXISTING TENNIS COURT AND PERIMETER FENCING TO REMAIN. COURT TO BE RESURFACED. SEE SHEET 19
- 12 202 L.F. OF 10' H. FENCING AT PERIMETER OF BASKETBALL COURT (GALVANIZED FINISH - MATCH EXISTING ADJACENT) - SEE SHEET 20 - COORDINATE FENCE INSTALLATION WITH ADJACENT SURFACES.
- 13 4'-5" WIDE GATE AT COURT ENTRANCE
- 14 10'-0" WIDE GATE
- 15 MODIFY FENCE ON EAST SIDE OF TENNIS COURT TO REMOVE EXISTING PEDESTRIAN ACCESS
- 16 MODIFY FENCE AT NORTH SIDE OF TENNIS COURT TO INSTALL NEW 4'-5" WIDE GATE AT COURT ENTRANCE
- 17 NEW TREE (BY OTHERS)

LEGEND

-  CONCRETE SIDEWALK/PAD
-  TENNIS / PICKLEBALL COURT
-  BASKETBALL COURT SEE SHEET 15
-  PIP RUBBER (BY OTHERS)
-  BITUMINOUS PATCH - MATCH ADJACENT BASE AND PAVEMENT COURSING
-  CONCRETE CURB & GUTTER
-  CONSTRUCTION LIMITS



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Brandon J. Brodhag
 BRANDON J. BRODHAG
 LIC. NO. 59297 DATE 03/28/2024



DESIGNED	NO.	ISSUED FOR	DATE
NRS			
DRAWN	JBQ		
CHECKED	BJB		
CLIENT PROJ. NO.			

NEIGHBORHOOD PARKS IMPROVEMENTS: LOGAN PARK
 PROJECT NO. 24-70457
 SITE PLAN

I:\Engineer\Projects\2024\Park System Improvement\Plan\24-707 - Logan Park Design\Drawings\Sheets\24-707_C601.dwg 3/28/2024 4:36:19 PM

Permit Application Review Report
Date: 6/12/2024

Board Meeting Date: 6/17/2024
Agenda Item: 9

Applicant/Landowner:

City of Blaine
Attn: Cody Sylvester
10801 Town Square Drive
Blaine, MN 55449

Project Name: 2024 Southwest Area Street Reconstruction Project

Project PAN: P-24-015

Project Purpose: Road reconstruction and CD 17 culvert improvements

Project Location: 89th Ave NE Between Coon Rapids Blvd and TH 65; Lincoln St; 85th and 86th, City of Blaine

Site Size: size of parcel - 17.82 acres; size of disturbed area - 17.82 acres; size of regulated impervious surface -

Applicable District Rule(s): Rule 2, Rule 3, Rule 4, Rule 6, Rule 7

Recommendation: Approve with 2 Conditions and 3 Stipulations

Description: The City of Blaine is proposing the reconstruction of numerous City streets and a culvert replacement in Springbrook Creek under 89th Ave NE. The project will disturb 17.8 acres and proposes 8.38 acres of new and fully reconstructed impervious. The project area is within the Springbrook Creek (Ditch 17) subwatershed. The relevant water resource concerns are stormwater management, erosion and sediment control, and culvert replacement. These correspond to District Rules 3, 4 and 6. See attached Figure 1: Project Location.

Conditions to be Met Before Permit Issuance:

Rule 2.7 – Procedural Requirements

1. Submittal of a performance escrow in the amount of \$8,910.00.

Rule 4.0 – Soils and Erosion Control

2. Update the erosion and sediment control plan to include a note to stabilize soils and soil stockpiles within 24 hours of inactivity.

Stipulations: The permit will be issued with the following stipulations as conditions of the permit. By accepting the permit, the applicant agrees to these stipulations:

1. Submittal of as-builts for the stormwater management practices and associated structures listed in Tables 2 and 3, including volume, sump inverts and critical elevations, and proof of hydrodynamic separators.
2. Submittal of as-built (invert, pipe material, pipe size) for culvert and storm structures installation within County Ditch 17.
3. Completion of post construction infiltration tests on basins Cell-1; SS-8881A, Cell-2; SS-8876A; 3, SS-4922A; 4, Filtration Trench (SS-117A); 5, SS-200D; 6, SS-200B; 7, SS-205B; 8, SS-210B; 9, SS211A; 10, SS-219 by filling the basins to a minimum depth of 6 inches with water and monitoring the time necessary to drain, or multiple double ring infiltration tests to ASTM standards. The Coon Creek Watershed District shall be notified prior to the test to witness the results.

Exhibits:

Exhibit Type	Exhibit Author	Signature Date	Received Date
Floodplain Impact	Bolton & Menk	04/01/2024	03/20/2024
Geotechnical Exploration Report	Hauge Geotechnical Services	01/12/2024	03/20/2024
Site Plan Figures	Bolton & Menk	undated	05/20/2024
CD 17 Analysis	Bolton & Menk	undated	03/20/2024
SHSAM Calculations	Bolton & Menk	undated	05/20/2024
Stormwater Management Report	Bolton & Menk	05/29/2024	05/29/2024
MIDS	Bolton & Menk	03/20/2024	05/29/2024
HydroCAD (Existing & Proposed)	Bolton & Menk	05/28/2024	05/29/2024
Construction Plans	Bolton & Menk	05/06/2024	05/29/2024
BMP Table	Bolton & Menk	undated	05/29/2024

Findings

Fees and Escrows (Rule 2.7):

The applicant is a government agency and is therefore exempt from an application fee or a review and inspection fee deposit. The applicant will be required to submit a performance escrow in the amount of \$8,910.00. This corresponds to a base escrow of \$2,000, plus an additional \$500/acre of disturbance (17.82 acres of land disturbance proposed).

Stormwater Management (Rule 3.0):

Rule 3.0 applies to the proposed project because it is a public linear project where the sum of the new and fully reconstructed impervious surface equals one or more acres.

The Hydrologic Soil Group (HSG) of soils on site are HSG A.

Rate Control: Peak stormwater flow rate at each point of site discharge does not increase from the pre-development condition for the 24-hour precipitation event with a return frequency of 2-, 10-, 100- years as shown in Table 1. The project will not impact Drainage Sensitive Use areas.

Point of Discharge	2-year (cfs)		10-year (cfs)		100-year (cfs)	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
87th Ln	2.27	2.22	4.07	4.02	8.41	8.35
Laddie Lake/Out-4	54.71	53.31	106.51	104.42	236.16	232.23
Central Ave	2.83	2.03	3.38	3.38	6.42	6.42
91st Ave	6.12	5.5	12.21	11.44	27.77	26.86

88th Ave	9.79	9.58	19.46	19.12	43.36	42.79
CD 17	14.3	13.5	25.11	23.8	51.16	48.83

Table 1.

Volume Control: The proposed project is a public linear project; therefore, the volume reduction requirement is equal to 1 inch over the area of new impervious surface, or 0.5 inches over the sum of the area of new and fully reconstructed impervious surface, whichever is greater. The amount of proposed impervious required to be treated is 365,033 ft².

The applicant is proposing the Stormwater Management Practices (SMPs) described below:

Drainage Area	Impervious required to be treated (ft ²)	Proposed SMP	TP Removal Factor	Required Water Quality Volume (ft ³)	Water Quality Volume Provided (ft ³)
87th Ln.	13,852	0	0	577	0
Laddie lake / Out-4	196,456	Multiple Basins	1/0.5	8,186	4,539
Central Ave	10,542	0	0	439	0
91st Ave	14,723	0	0	613	0
88th Ave	46,609	SS-8876A	0.5	1,942	429
CD17	82,851	SS-8881A	1	3,452	160
Totals:	365,033			15,210	5,059

Table 2.

The following pretreatment has been provided:

SMP ID	Pretreatment Device/Method	Percent TSS Removal
SS-214	Sump Manhole	94.95
Rain Guardian	Rain Guardian	80
SS-212A	Sump Manhole	88.15
SS-211B	Sump Manhole	99.6
SS-206B	Sump Manhole	97.6
SS-201B	Sump Manhole	94.55
SS-201D	Sump Manhole	99.95
SS-126	Sump Manhole	99.1
SS-114	Sump Manhole	95.55
SS-118	Sump Manhole	74.1

Table 3.

Pretreatment is required to be designed such that the device/method provides removal of 80% TSS entering an infiltration or filtration Stormwater Management Practice. SS-118 Sump Manhole does not meet the TSS requirements because a 4-foot sump (which would meet 80%) cannot be utilized due to utility conflicts. The proposed project meets pretreatment requirements to the maximum extent practicable as shown in Table 3.

Due to limited green space, fully developed adjacent areas, utility conflicts, and location within the Emergency Response Areas the volume control standard has been met to the maximum extent practicable as shown in Table 2.

Water Quality: The total Water Quality Volume for the project has been provided to the maximum extent practicable.

Stormwater treatment on site must remove at least 80% of the average annual post development TSS per discharge location. The following TSS removal has been provided:

Discharge Point	TSS Removal Provided
87th Ln	0
Laddie Lake/Out-4	58
Central Ave	0
91st Ave	0
88th Ave	63
CD17	96

Table 4.

The TSS removal standard is not met at each discharge point as shown in Table 4 due to site constraints listed in the volume control section above.

Discharges to Wetlands: The proposed project does not discharge to any wetlands.

Landlocked Basins: The proposed drainage system does not outlet to a landlocked basin, therefore this section does not apply.

Low Floor Freeboard: The proposed project is not considered new development with buildings and habitable structures; therefore, this section does not apply.

Maintenance:

Access: Sufficient maintenance access has been provided on the plans for all stormwater management practices.

Easements: All required maintenance easements have been provided on the plans.

Maintenance Agreements: All proposed stormwater management practices will be maintained as part of standard municipal public work activities. Therefore, no maintenance agreement will be required.

Soils and Erosion Control (Rule 4.0)

Rule 4.0 applies to the proposed project because it is a land disturbing activity that requires a permit under another District rule.

The proposed project drains to Springbrook Creek (CD 17). The soils affected by the project include Zimmerman and Isanti and have a soil erodibility factor of 0.15 or greater. Disturbed areas are not proposed to be stabilized within 24 hours, as required. The proposed erosion and sediment control plan includes perimeter control, inlet protection, and erosion control blanket. The erosion control plan does not meet District requirements because soils and soil stockpiles are not consistently proposed to be stabilized within 24 hours of inactivity. See attached Figure 2: Erosion and Sediment Control Plan.

Wetlands (Rule 5.0)

The proposed project does not include activities which result in the filling, draining, excavating, or otherwise altering the hydrology of a wetland. Rule 5.0 does not apply.

Floodplain (Rule 6.0)

Rule 6.0 applies to the proposed project because it includes land disturbing activities within or adjacent to the boundary of the 100-year flood elevation as mapped and modeled by the District.

The regulatory floodplain elevation is 897.8 ft MSL. The application proposes the placement of 47.13 cubic yards of fill within the floodplain. This a one-time deposition of less than 50 cubic yards, therefore compensatory storage is not required. The deposition will not affect the flow capacity of the ditch. See attached Figure 3: Floodplain Impacts.

Drainage, Bridges, Culverts, and Utility Crossings (Rule 7.0)

Rule 7.0 applies to the proposed project because it includes land disturbing activities which construct-improve-repair or alter the hydraulic characteristics of a bridge profile control or culvert structure on a creek-public ditch or major watercourse.

The regulated waterway is Springbrook Creek (County Ditch 17). The City is proposing to replace the existing CMP culvert with a RCP pipe and inlet structure designed to block debris from entering the downstream storm sewer system. Hydraulic options were modelled and reviewed. The banks of the waterway have been proposed to be stabilized with permanent vegetation. The proposed conditions and gradient of the waterway will not result in a velocity that will cause bank erosion.

Buffers (Rule 8.0)

The proposed project does not include a land disturbing activity on land adjacent or directly contributing to a Public Water, Additional Waters, High or Outstanding Ecological Value Waters, a Public Ditch, or Impaired Waters/waters exceeding state water quality standards. Rule 8.0 does not apply.

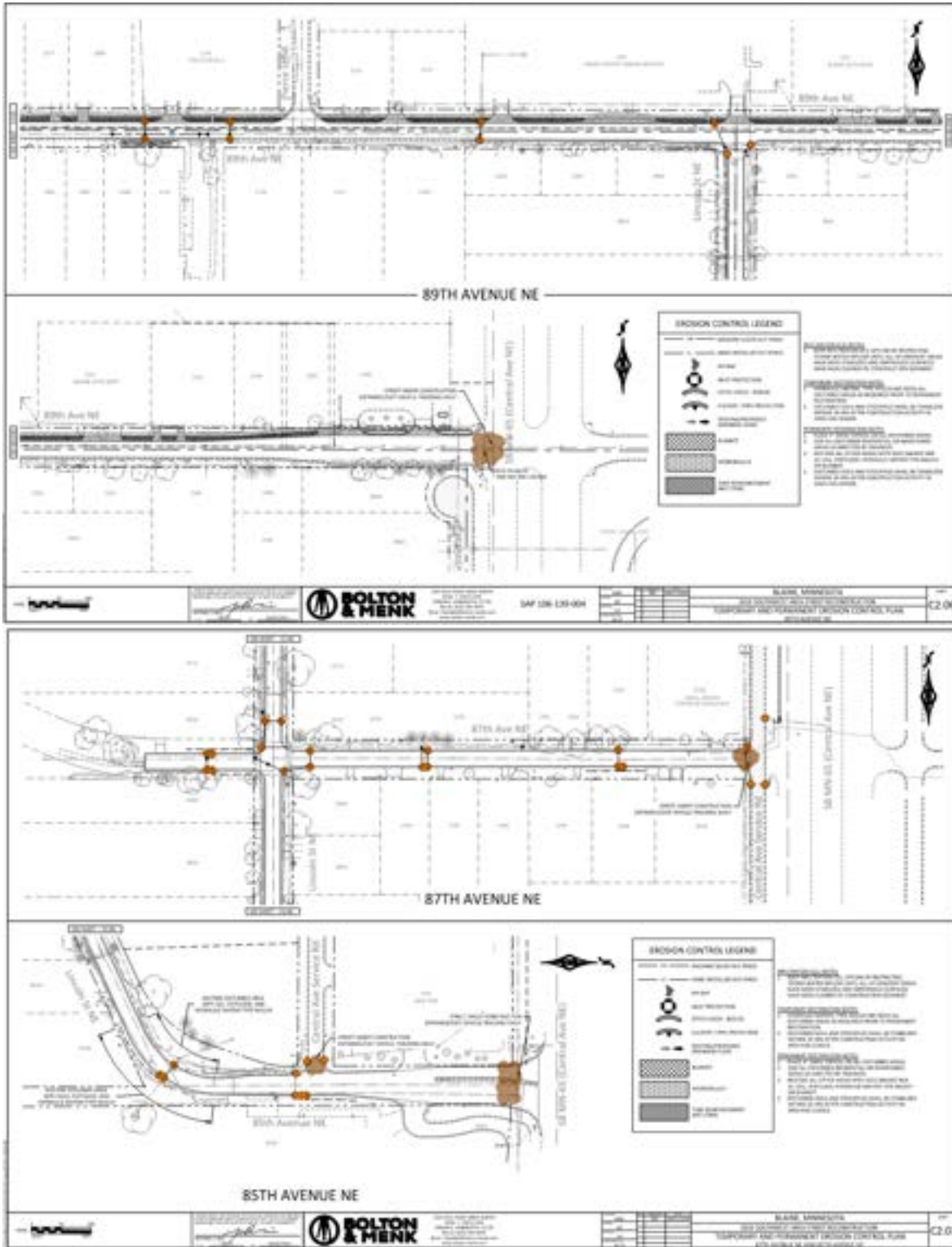
Variations (Rule 10.2)

The proposed project is not requesting a variance from the District's rules, regulations, and policies. Rule 10.2 does not apply.

P-24-015



Figure 1: Project Location



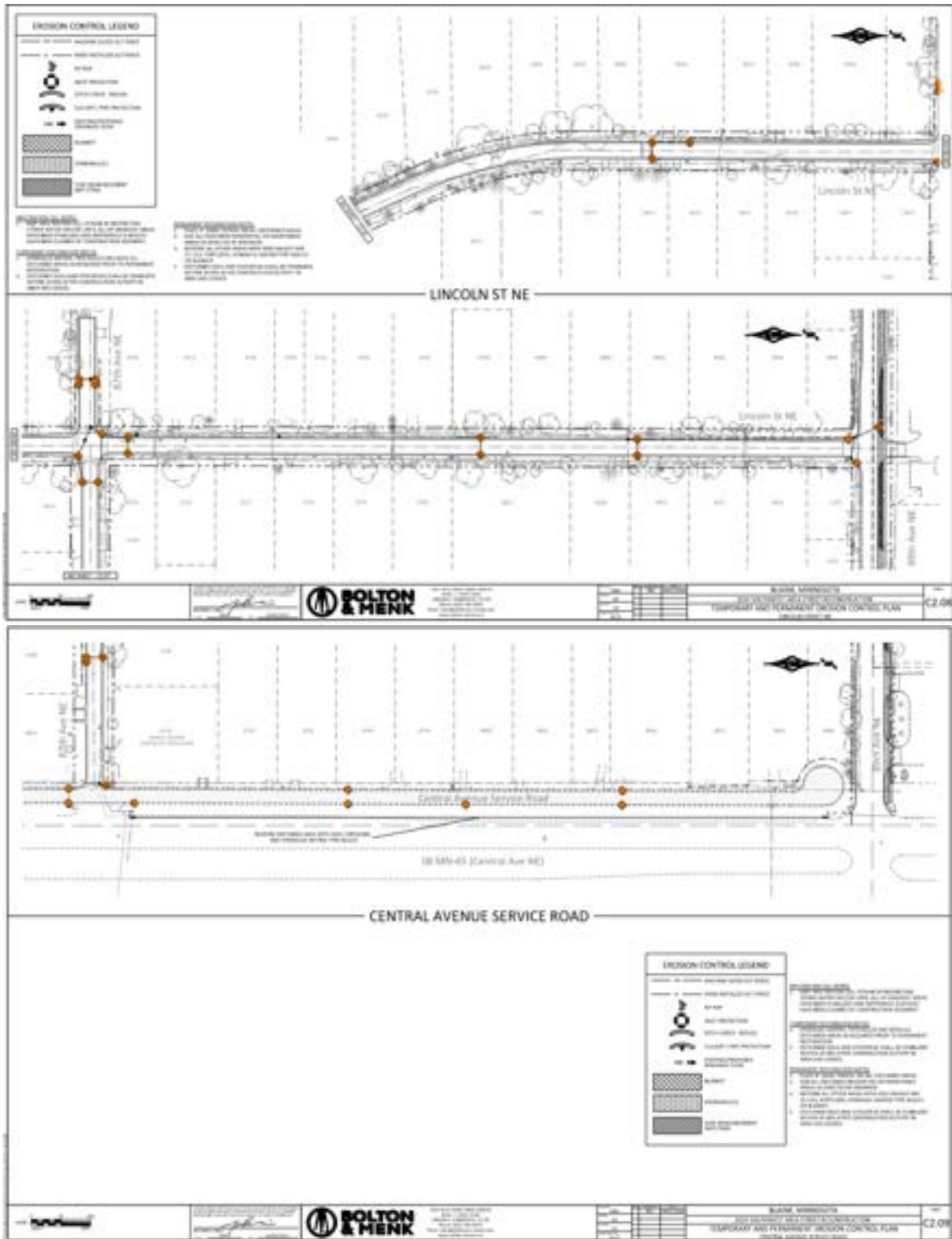
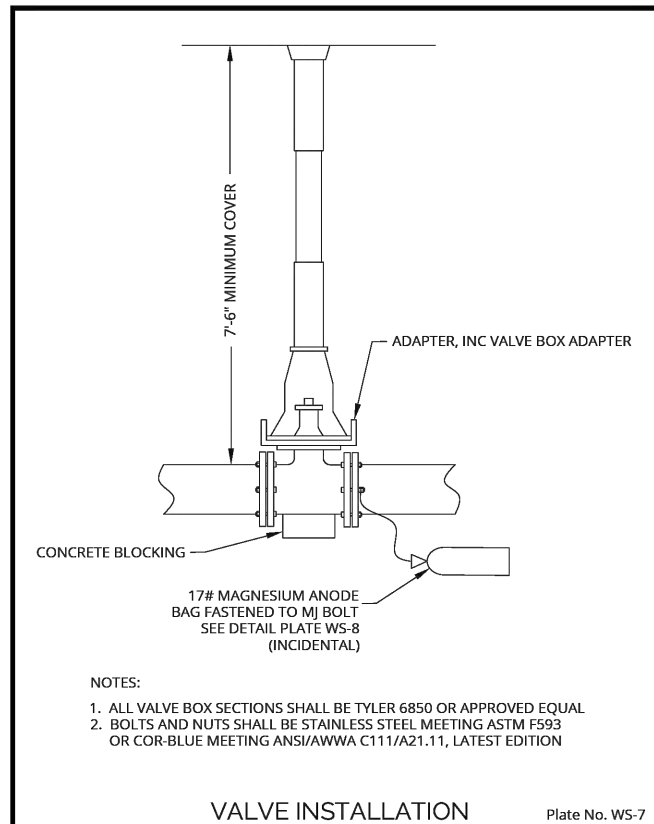
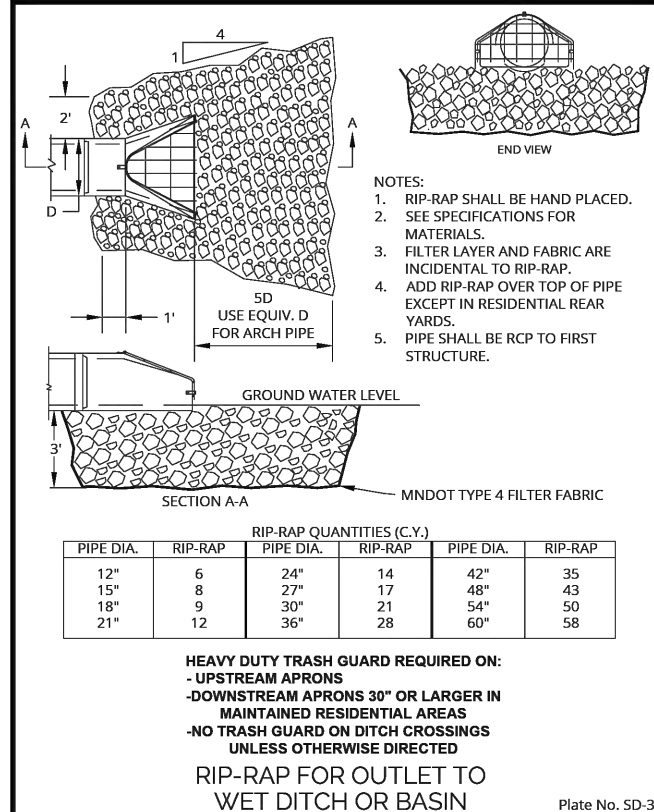


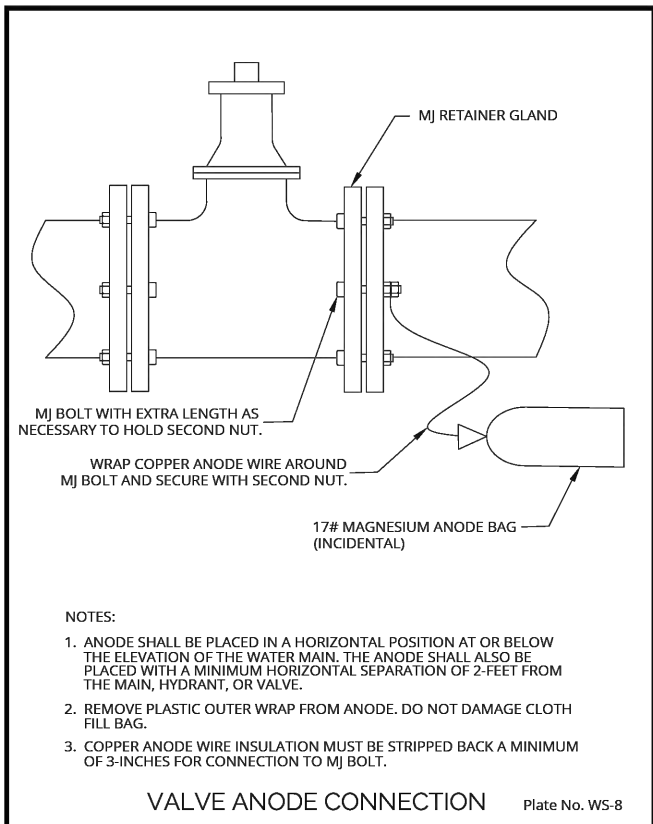
Figure 2: Erosion and Sediment Control Plan



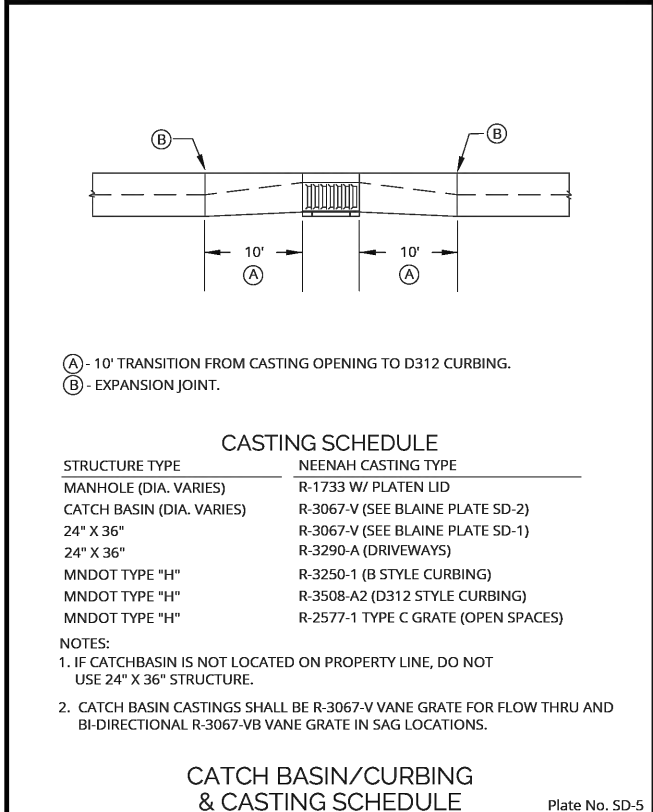
2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



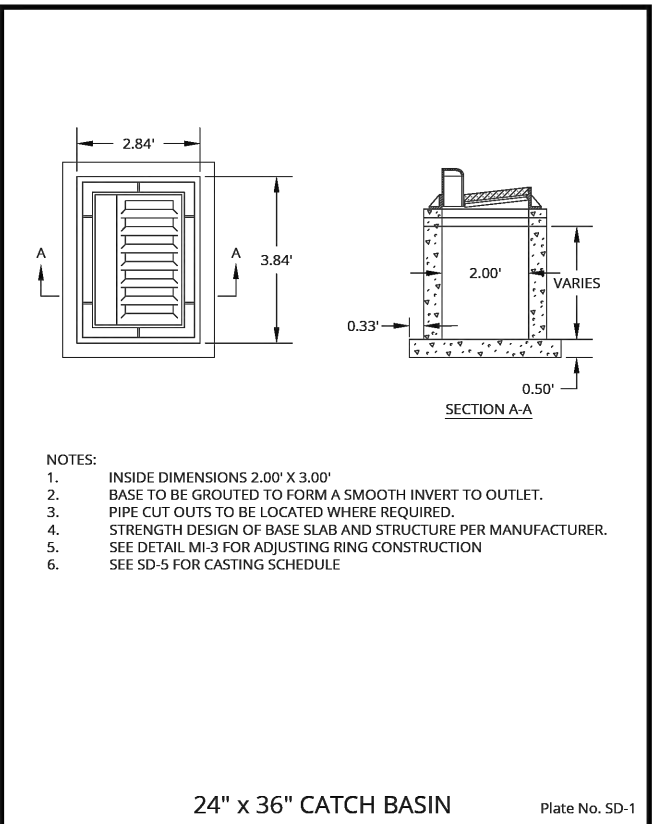
2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



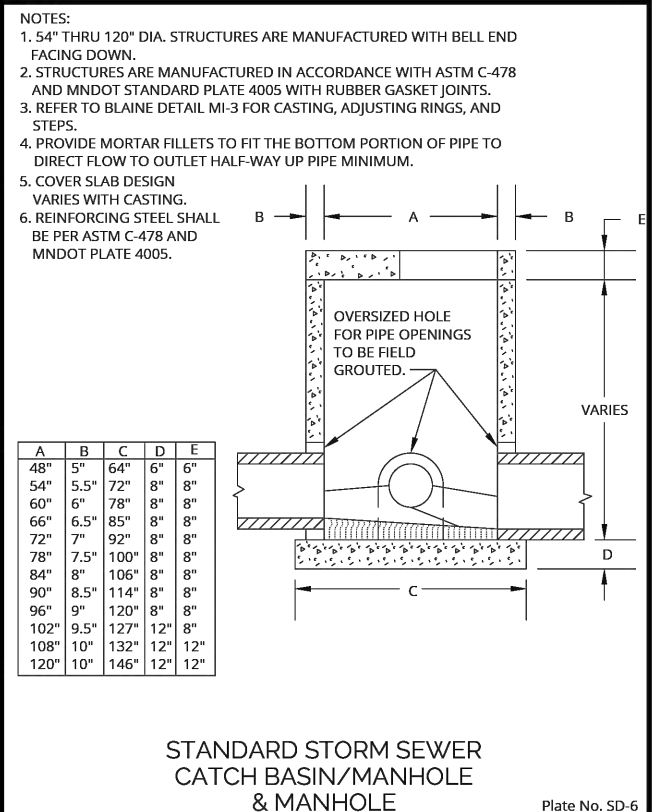
2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



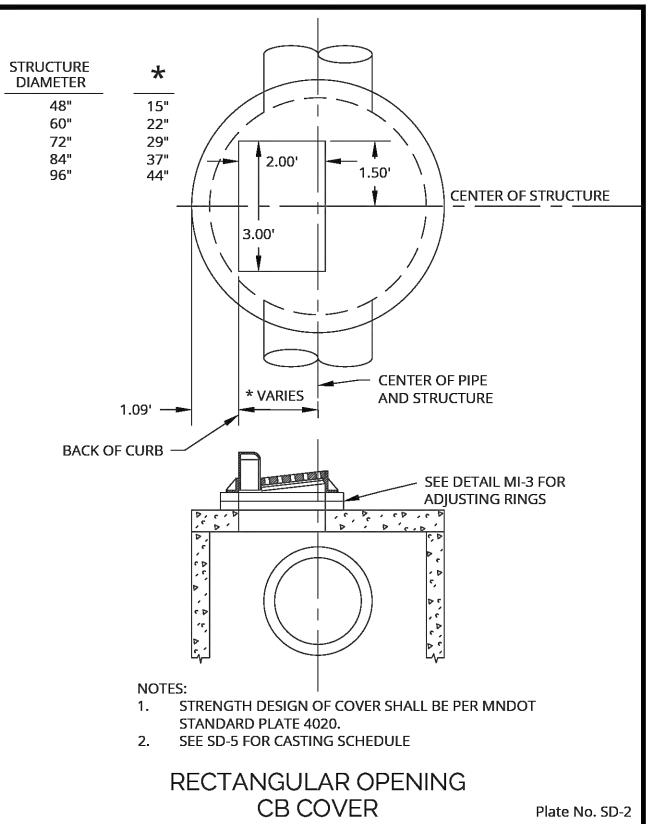
2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



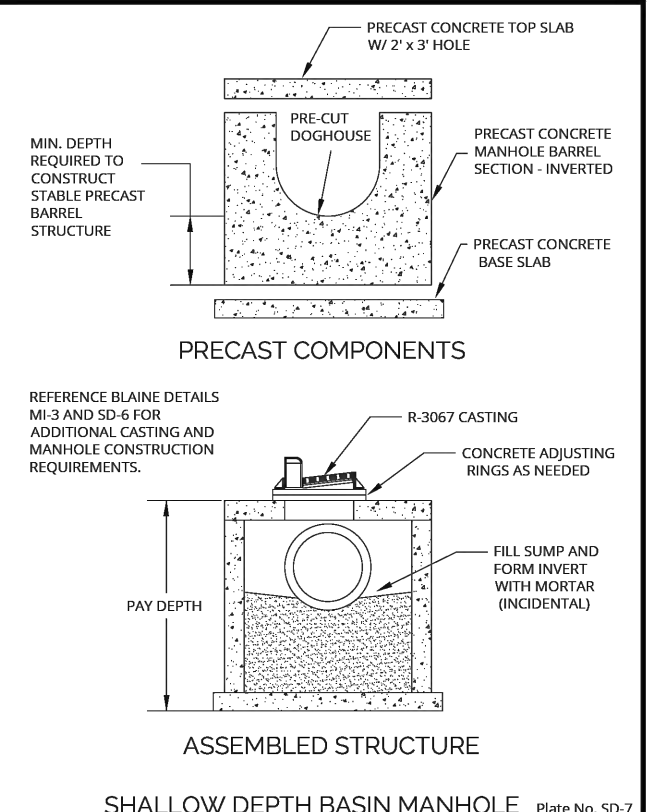
2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139

© Bolton & Menk, Inc. 2024. All Rights Reserved. 10/13/2024 11:35:53 AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



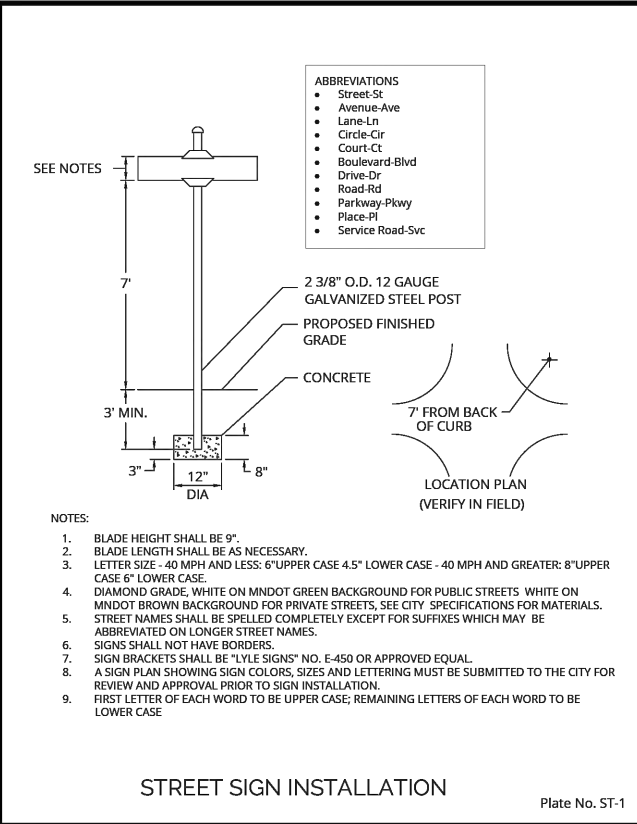
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.			
24-07			

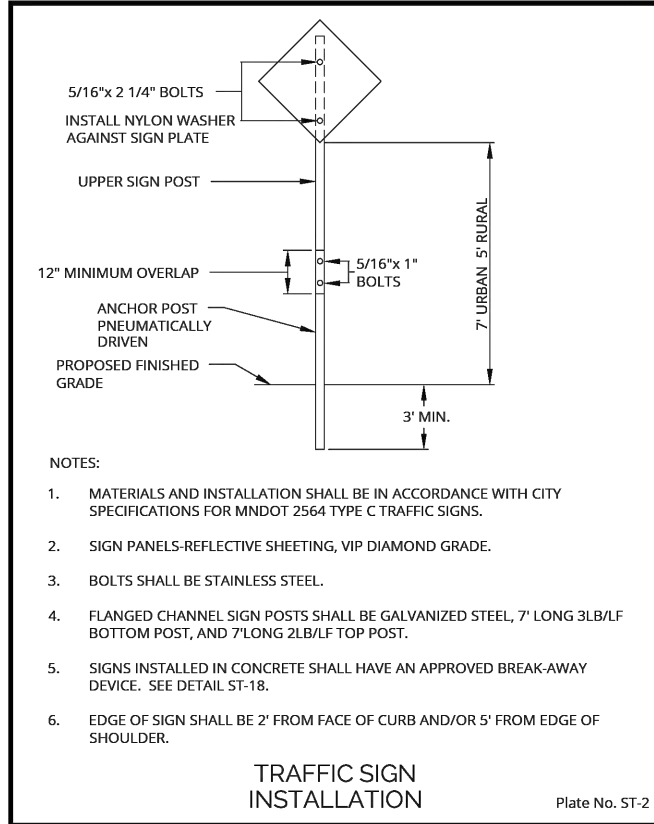
BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STANDARD DETAILS

SHEET
 C1.15



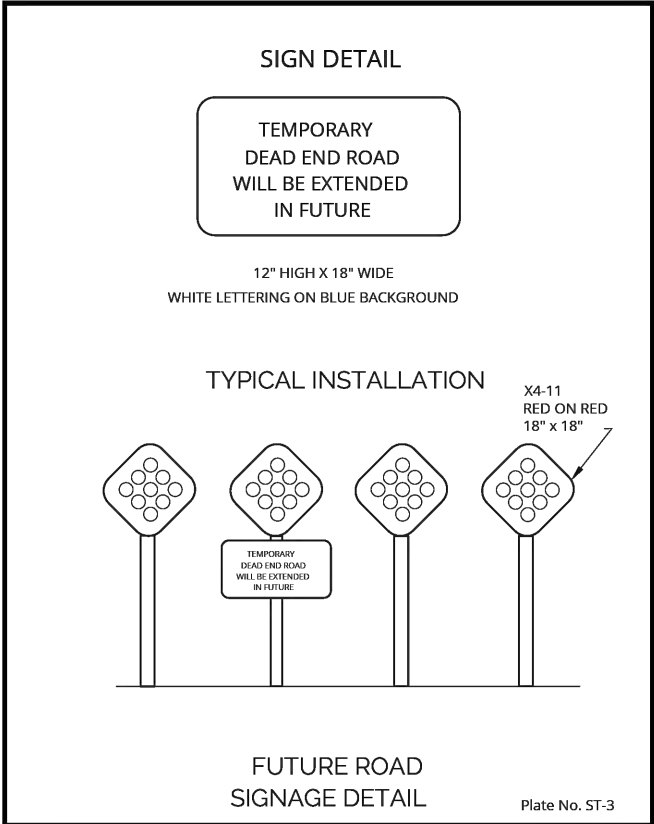
STREET SIGN INSTALLATION Plate No. ST-1

2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139

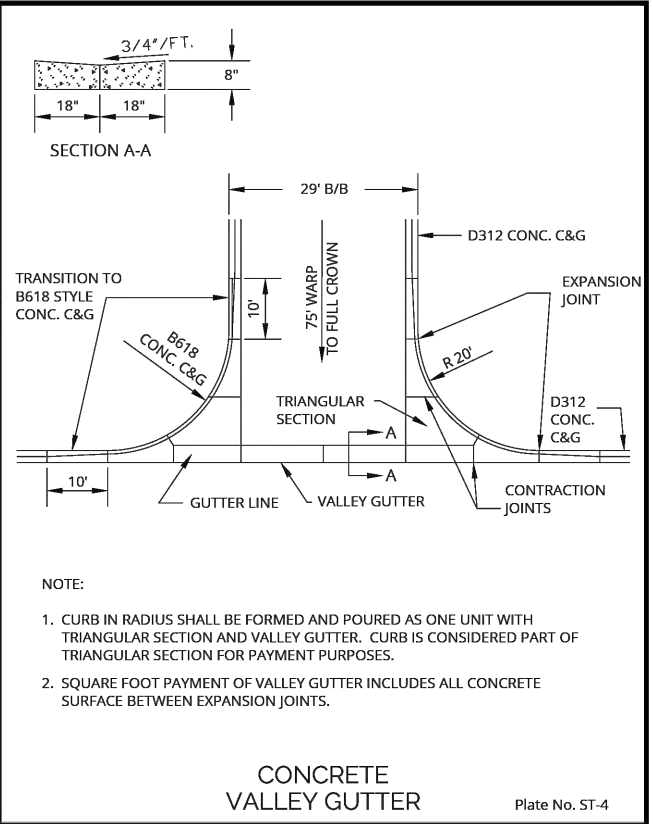


TRAFFIC SIGN INSTALLATION Plate No. ST-2

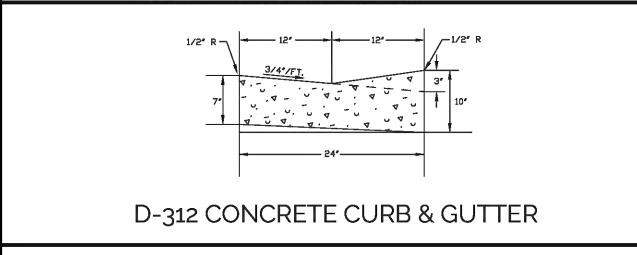
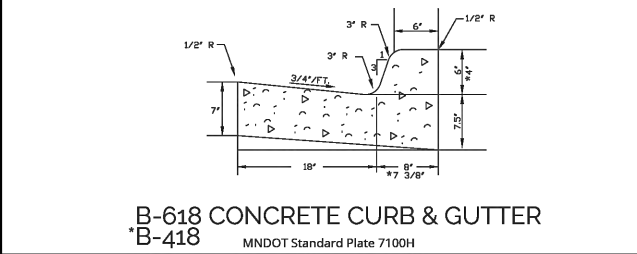
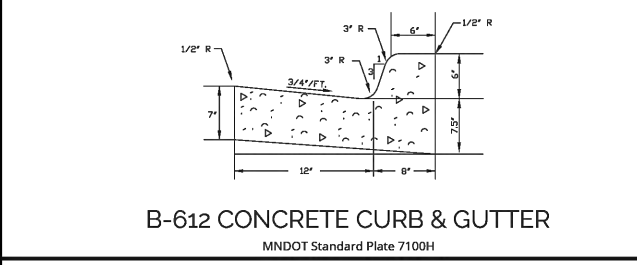
2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139

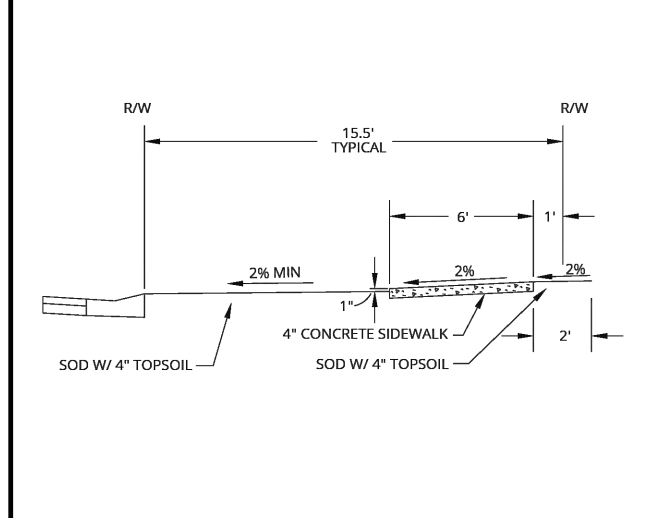


2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



CONCRETE CURB & GUTTER Plate No. ST-6

2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



NOTES:

1. INCREASE SIDEWALK THICKNESS THROUGH EXISTING DRIVEWAYS TO 6" MINIMUM.
2. SEE MNDOT STANDARD SPECIFICATIONS 2521.3 D.2 JOINT CONSTRUCTION.
3. SEE DETAIL ST-14 FOR PEDESTRIAN RAMP.

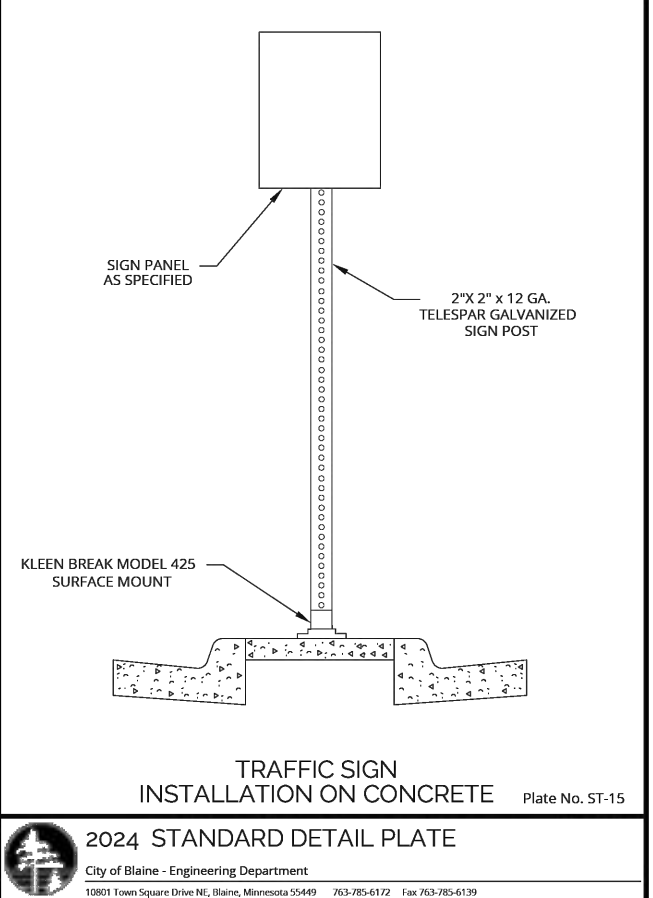
2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139

THE CITY OF BLAINE WILL USE MNDOT STANDARD PLAN SHEETS 5-297.250 (1-6) FOR THE CONSTRUCTION OF RAMPS, EXCEPT AS MODIFIED BELOW:

1. TRUNCATED DOME PANELS SHALL BE GRAY EPOXY COATED PER CURRENT MNDOT APPROVED PRODUCTS LIST.
2. THE PANELS SHALL BE INSTALLED IN WET MORTAR BASE OVER A 6" CONCRETE SLAB.

PEDESTRIAN RAMP REQUIREMENTS Plate No. ST-14

2024 STANDARD DETAIL PLATE
 City of Blaine - Engineering Department
 10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:35:33 AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



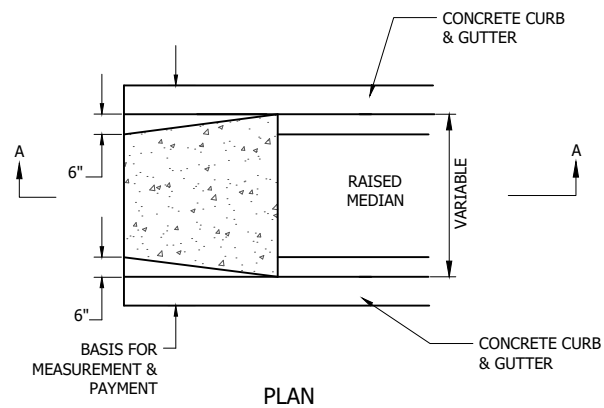
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

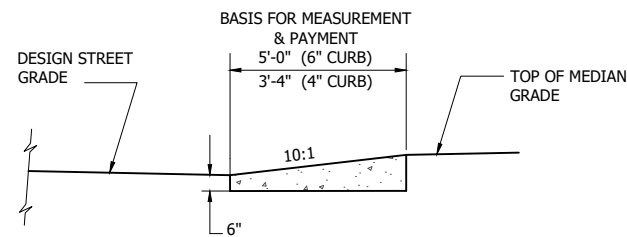
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.			
	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STANDARD DETAILS

SHEET
C1.16

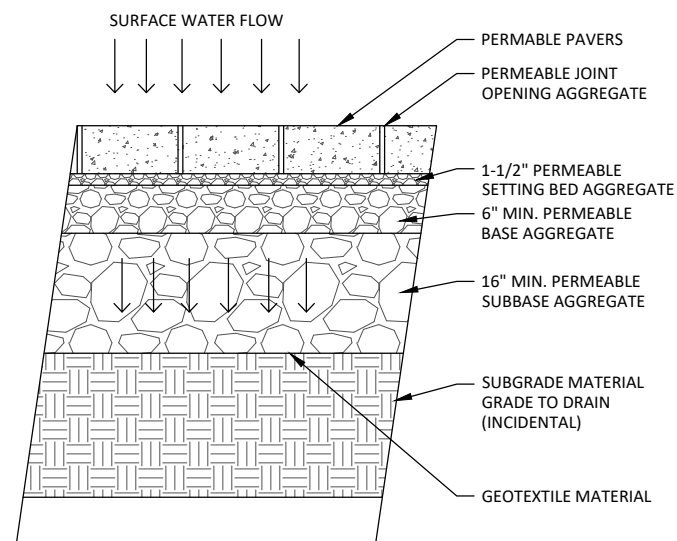


PLAN

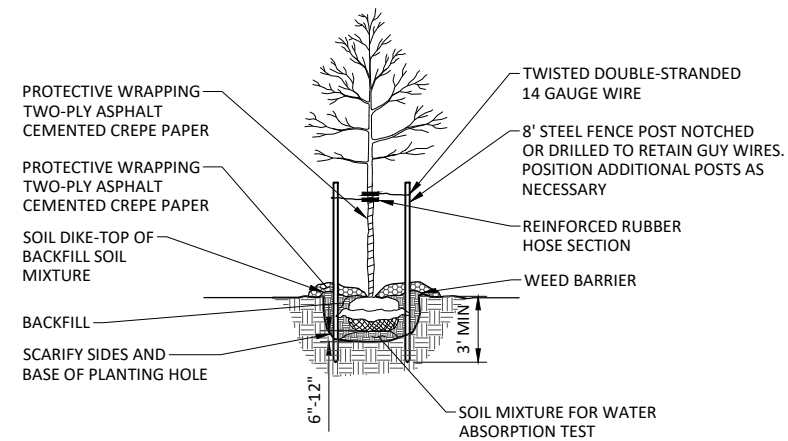


SECTION A-A

1
C1.17
CONCRETE APPROACH NOSE
STANDARD DETAIL
NOT TO SCALE



2
C1.17
PERMEABLE CONCRETE PAVERS
STANDARD DETAIL
NOT TO SCALE



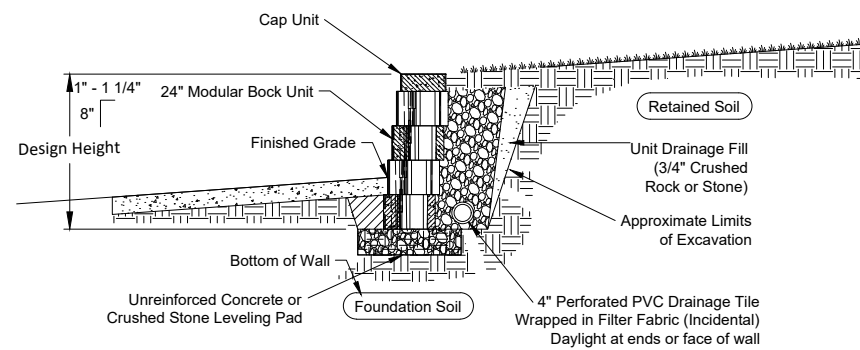
DECIDUOUS TREE PLANTING

NOT TO SCALE

- BAG & BALL PLANTING NOTE:
1. REMOVE WRAPPING AND ALL TIES OR STRAPS. IF ROOT BALL IS WRAPPED IN BURLAP THE LOWER 1/2 PORTION OF THE FABRIC MAY BE LEFT AT THE BOTTOM OF THE HOLE. SYNTHETIC WRAP MUST BE REMOVED AND PROPERLY DISPOSED.
 2. LOOSEN ROOTS TO ENSURE THEY ARE NOT GIRDLING THE ROOT BALL.
 3. SALVAGE AND REUSE ALL SOIL THAT CAME WITH THE ROOT BALL.
 4. IF ROOT BALL IS EXTREMELY DRY WATER IT PRIOR TO PLACING IT IN THE HOLE.
 5. IF TREE IS CONTAINER GROWN, SALVAGE ALL SOIL AND MIX WITH SUPPLEMENTED SOIL FOR BACK FILL.

1. PROVIDE AND INSTALL HEALTHY PLANT MATERIALS THAT MEET ALL SPECIFICATIONS AND ARE OF THE SIZE, TYPE AND SPECIES NAMED ON THE PLANT SCHEDULE AND SHOWN ON THE PLANS.
2. DIG PLANT HOLE 1'-0" MINIMUM LARGER ON ALL SIDES THAN ROOT BALL.
3. PRIOR TO PLACING TREE, SCARIFY BOTTOM AND SIDES OF THE PLANTING HOLE.
4. TEST SOIL ABSORPTION. FILL HOLE PARTIALLY WITH SUPPLEMENTED SOIL MIXTURE, ADD WATER AND ALLOW TO PUDDLE AND SETTLE PRIOR TO SETTING TREE.
5. AFTER PUDDLING HAS SETTLED, SET TREE AND BACK FILL WITH SUPPLEMENTED SOIL MIXTURE.
6. WATER THOROUGHLY AND ADD BACK FILL AS NEEDED AFTER MOISTURE IS ABSORBED.
7. BUILD SOIL DIKE AROUND PERIPHERY OF TREE TO HOLD WATER.
8. AFTER SETTLEMENT, MULCH WITH MINIMUM 4" LAYER SHREDDED BARK, WOOD CHIPS OR AS OTHERWISE SPECIFIED. DO NOT MULCH UP AGAINST THE TRUNK.
9. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF THE TREE.

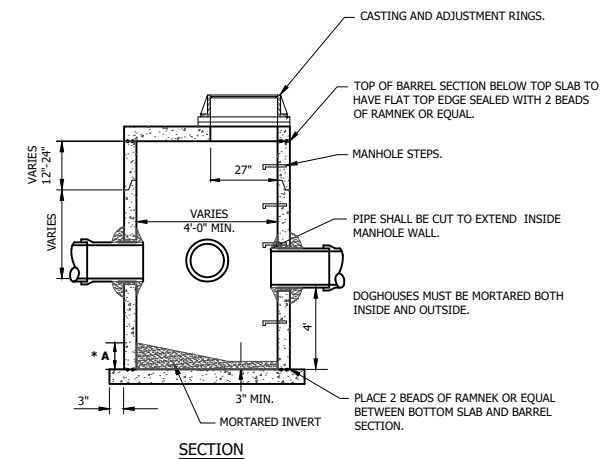
3
C1.17
DECIDUOUS TREE
PLANTING
NOT TO SCALE



Note:
Bottom Of Wall Determined By
Specific Manufactures Bury
Requirements

TYPICAL WALL SECTION

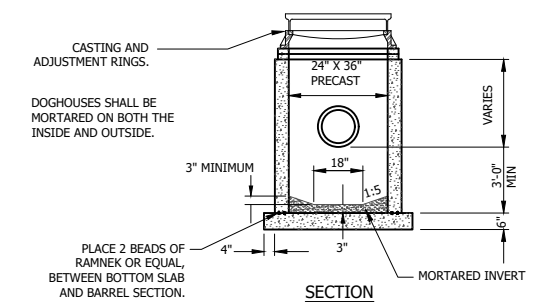
4
C1.17
BLOCK RETAINING WALL
STANDARD DETAIL
NOT TO SCALE



SECTION

*A
4" DIA STRUCTURE = 6"
5" DIA STRUCTURE = 8"
6" DIA STRUCTURE = 9"

5
C1.17
STORM SEWER MANHOLE WITH SUMP
STANDARD DETAIL
NOT TO SCALE



SECTION

PLACE 2 BEADS OF
RAMNEK OR EQUAL,
BETWEEN BOTTOM SLAB
AND BARREL SECTION.

6
C1.17
CATCH BASIN WITH SUMP
STANDARD DETAIL
NOT TO SCALE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

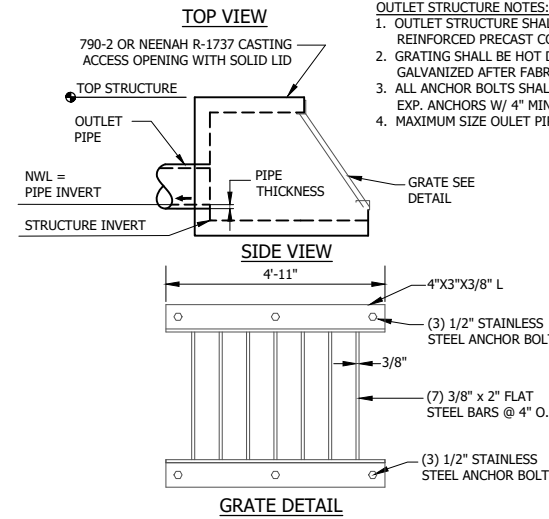
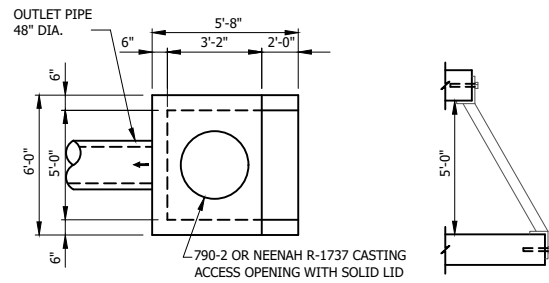
SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
PROJECT SPECIFIC DETAILS

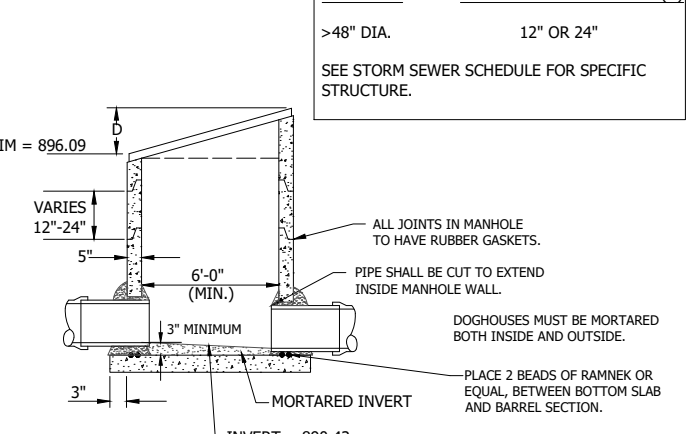
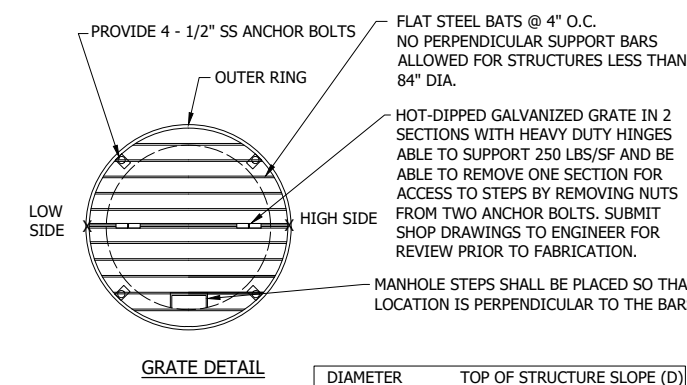
SHEET

C1.17

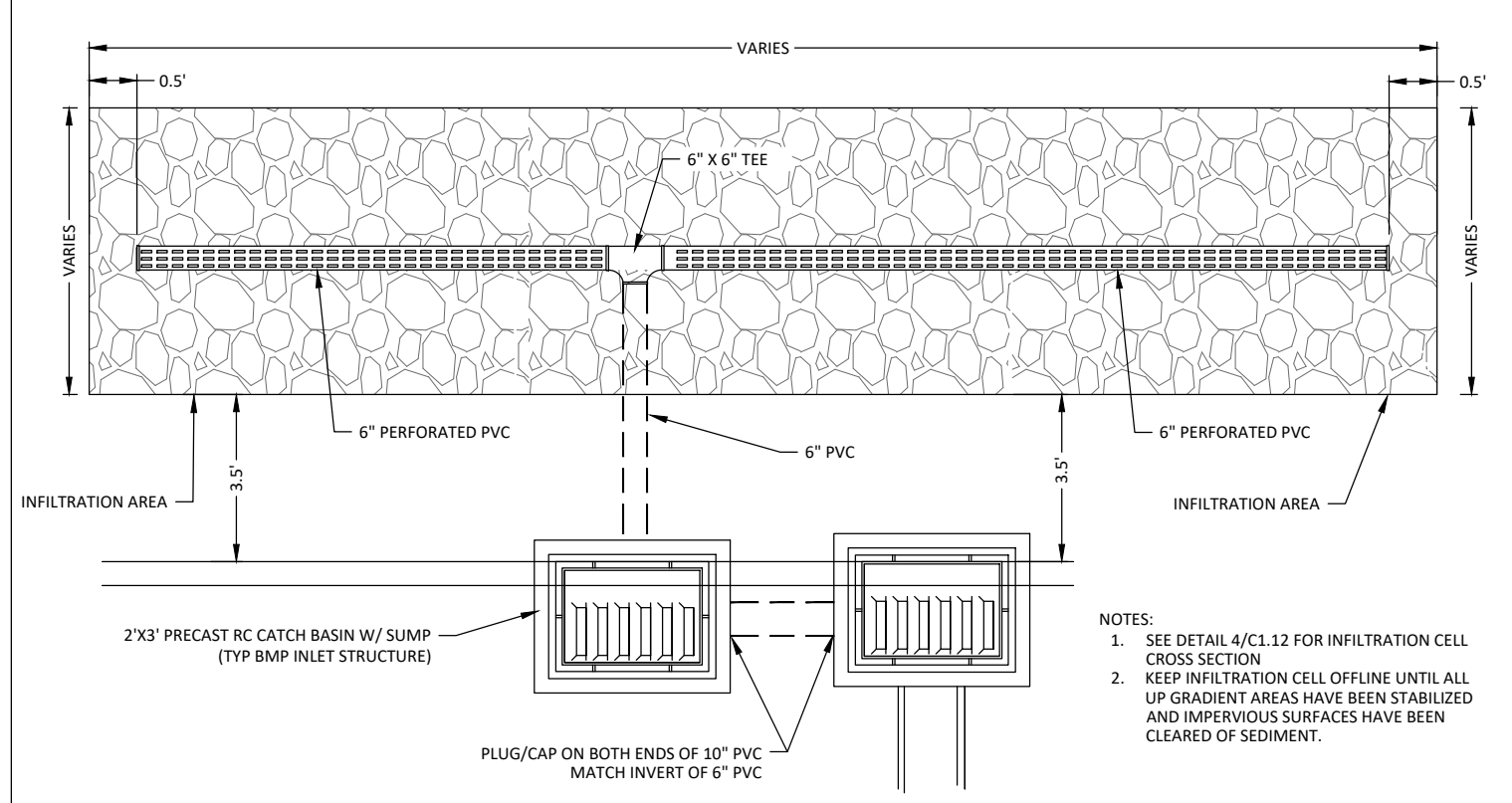


7
C1.18
OUTLET STRUCTURE 48" PIPE
STANDARD DETAIL
NOT TO SCALE

- OUTLET STRUCTURE NOTES:**
1. OUTLET STRUCTURE SHALL BE REINFORCED PRECAST CONCRETE.
 2. GRATING SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
 3. ALL ANCHOR BOLTS SHALL BE 1/2" O.S.S. EXP. ANCHORS W/ 4" MIN. EMBEDMENT.
 4. MAXIMUM SIZE OUTLET PIPE TO BE 18".

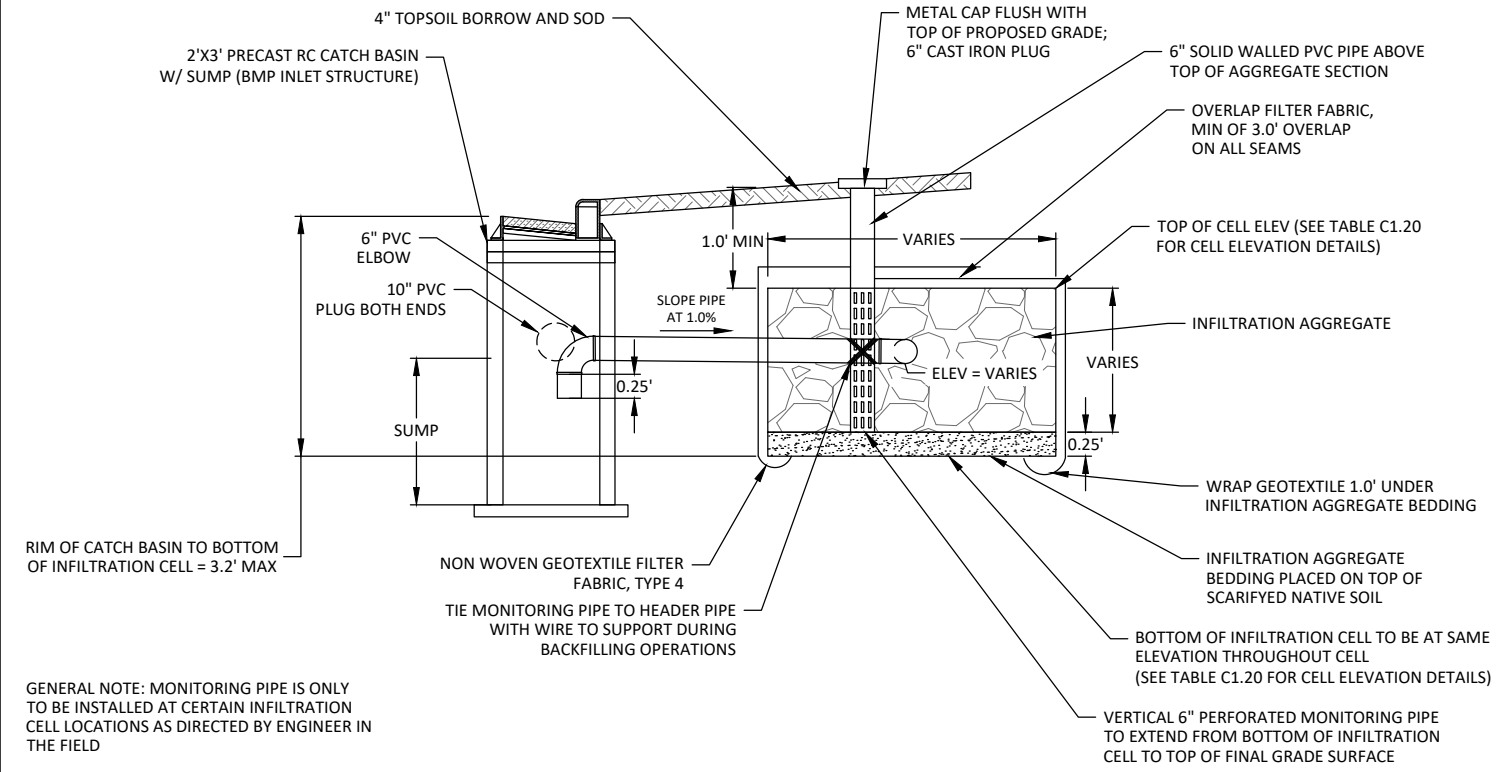


8
C1.18
OVERFLOW STRUCTURE WITH TRASH GUARD
STANDARD DETAIL
NOT TO SCALE



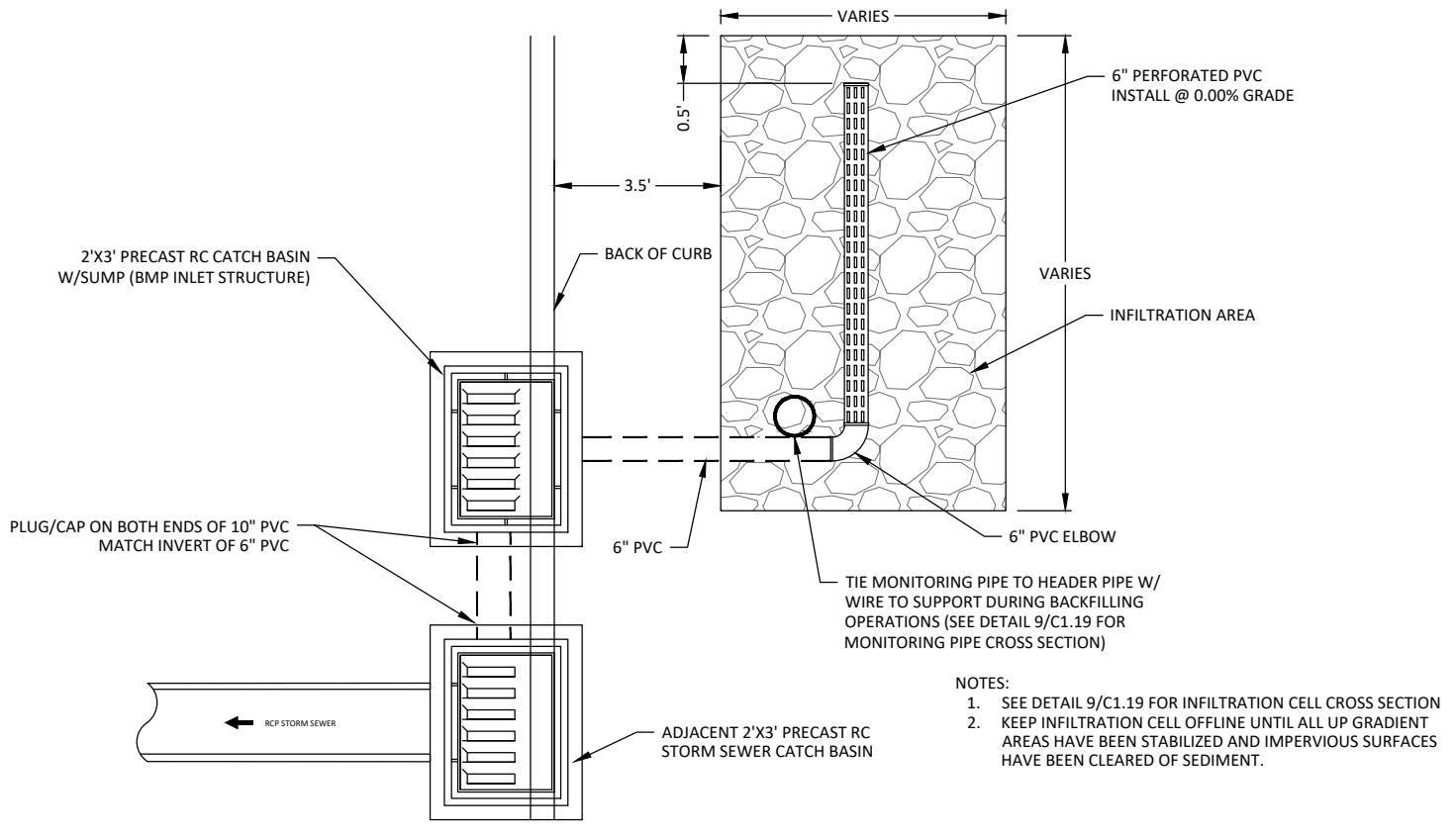
9
C1.18
INFILTRATION CELL (MID OUTLET CONFIGURATION)
W/ ADJACENT CB PLAN VIEW
NOT TO SCALE

- NOTES:**
1. SEE DETAIL 4/C1.12 FOR INFILTRATION CELL CROSS SECTION
 2. KEEP INFILTRATION CELL OFFLINE UNTIL ALL UP GRADIENT AREAS HAVE BEEN STABILIZED AND IMPERVIOUS SURFACES HAVE BEEN CLEARED OF SEDIMENT.



10
C1.18
INFILTRATION CELL
CROSS SECTION
NOT TO SCALE

GENERAL NOTE: MONITORING PIPE IS ONLY TO BE INSTALLED AT CERTAIN INFILTRATION CELL LOCATIONS AS DIRECTED BY ENGINEER IN THE FIELD



11
C1.18
INFILTRATION CELL (END OUTLET CONFIGURATION)
W/ ADJACENT CB PLAN VIEW
NOT TO SCALE

- NOTES:**
1. SEE DETAIL 9/C1.19 FOR INFILTRATION CELL CROSS SECTION
 2. KEEP INFILTRATION CELL OFFLINE UNTIL ALL UP GRADIENT AREAS HAVE BEEN STABILIZED AND IMPERVIOUS SURFACES HAVE BEEN CLEARED OF SEDIMENT.

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/23/2024 10:53:53 AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

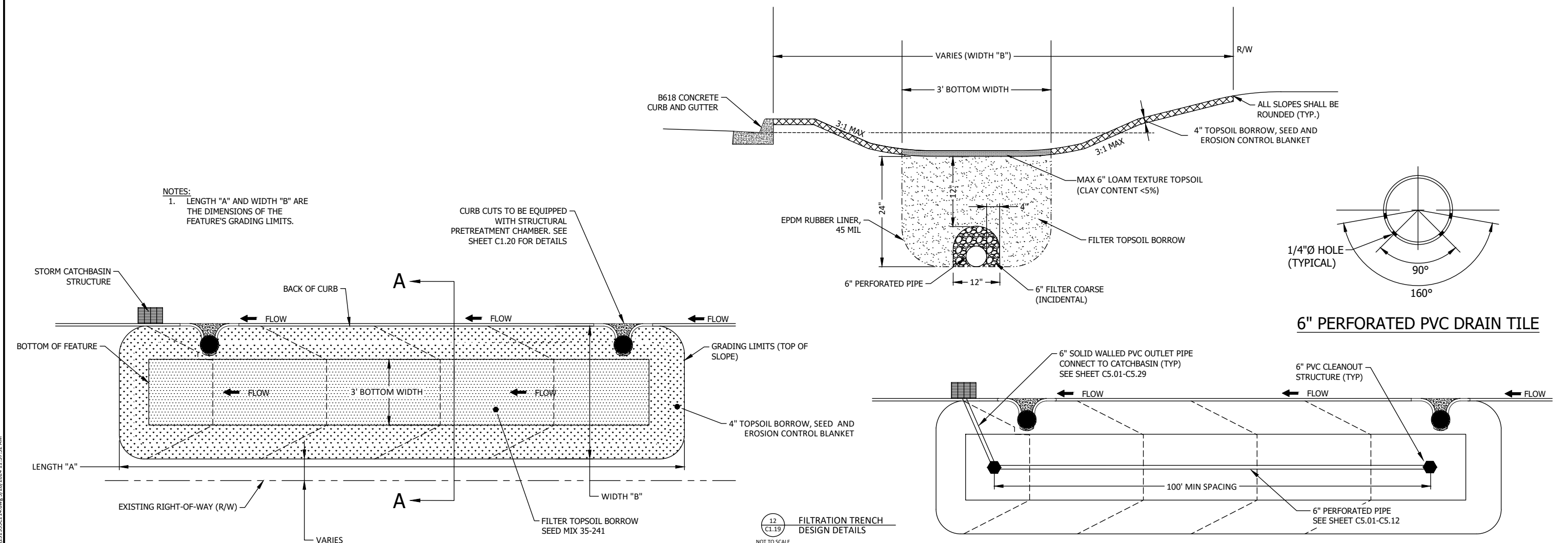
SAP 106-139-004

DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024
CHECKED	TJP			
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
PROJECT SPECIFIC DETAILS

SHEET
C1.18

BMP #; Inlet Structure ID	Proposed Inlet Structure Rim and/or BMP Overflow Elev.	Proposed PVC Pipe Inlet U/S Invert Elev	Inlet Structure Invert Elev. w/ 3' Sump	Inlet Structure Total Depth	Top of Infiltration Cell Elev.	Bottom of BMP Elev.	Proposed BMP Footprint	Proposed BMP Aggregate Section Total Depth
	ft	ft	ft	ft	ft	ft	sq-ft	ft
1; SS-114	901.43	899.18	896.18	5.25	900.57	898.23	150.0	2.34
2; SS-118	905.48	903.23	900.23	5.25	905.30	902.28	320.0	3.02
3; SS-126	911.42	909.17	906.17	5.25	910.59	908.22	350.0	2.37
4; SS-120A	See Plans	905.31	N/A	0.75	N/A	N/A	300.0	2.00
5; SS-201D	907.48	905.23	902.23	5.25	907.07	904.28	675.0	2.79
6; SS-201B	907.48	905.23	902.23	5.25	907.31	904.28	450.0	3.03
7; SS-206B	909.49	907.24	904.24	5.25	908.87	906.29	600.0	2.58
8; SS-211B	908.90	906.65	903.65	5.25	907.83	905.70	600.0	2.13
9; SS-212A	907.54	905.29	902.29	5.25	906.83	904.34	700.0	2.49
10; SS-214	909.37	907.12	904.12	5.25	908.84	906.17	600.0	2.67



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/23/2024 11:37:52 AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



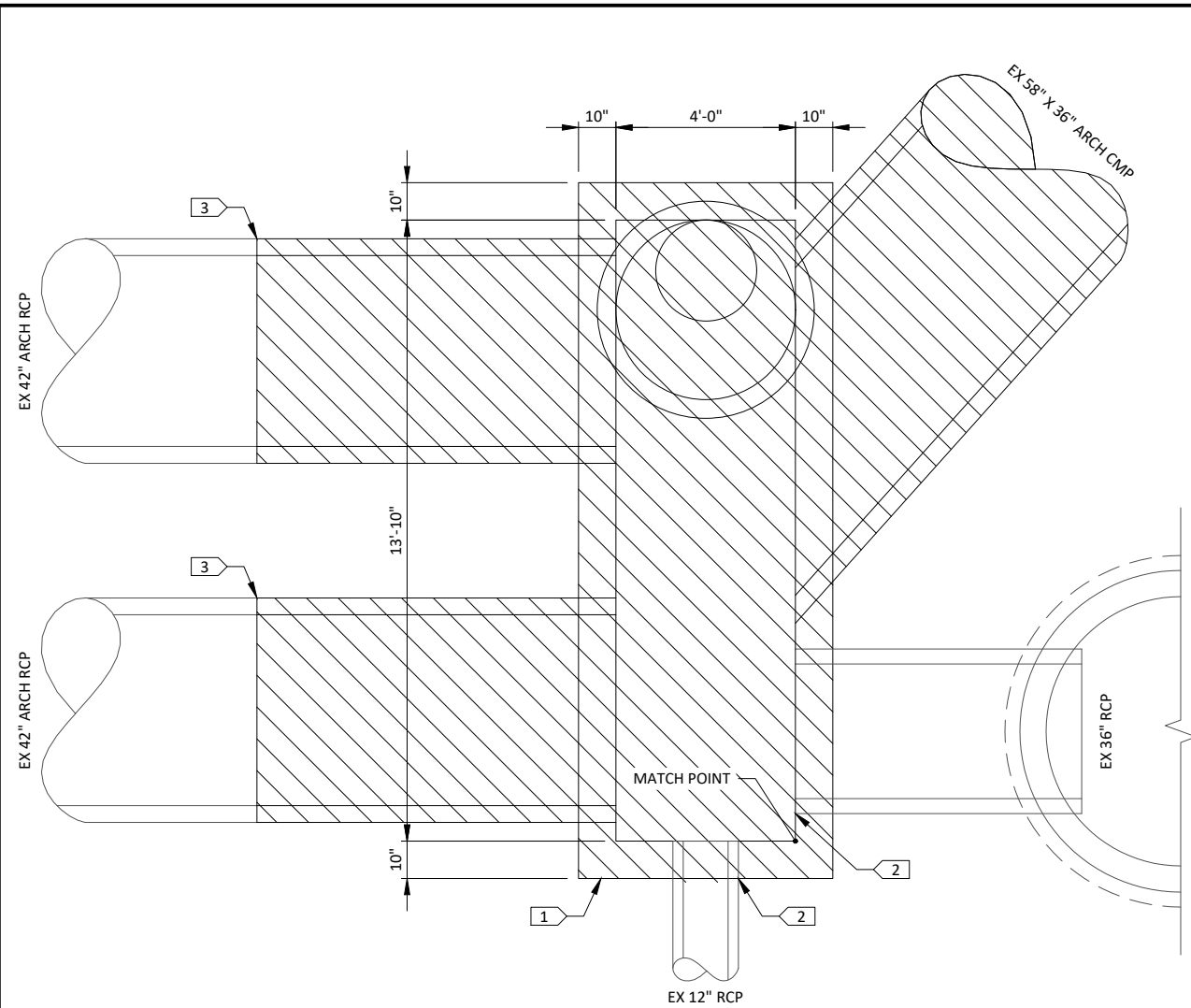
3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

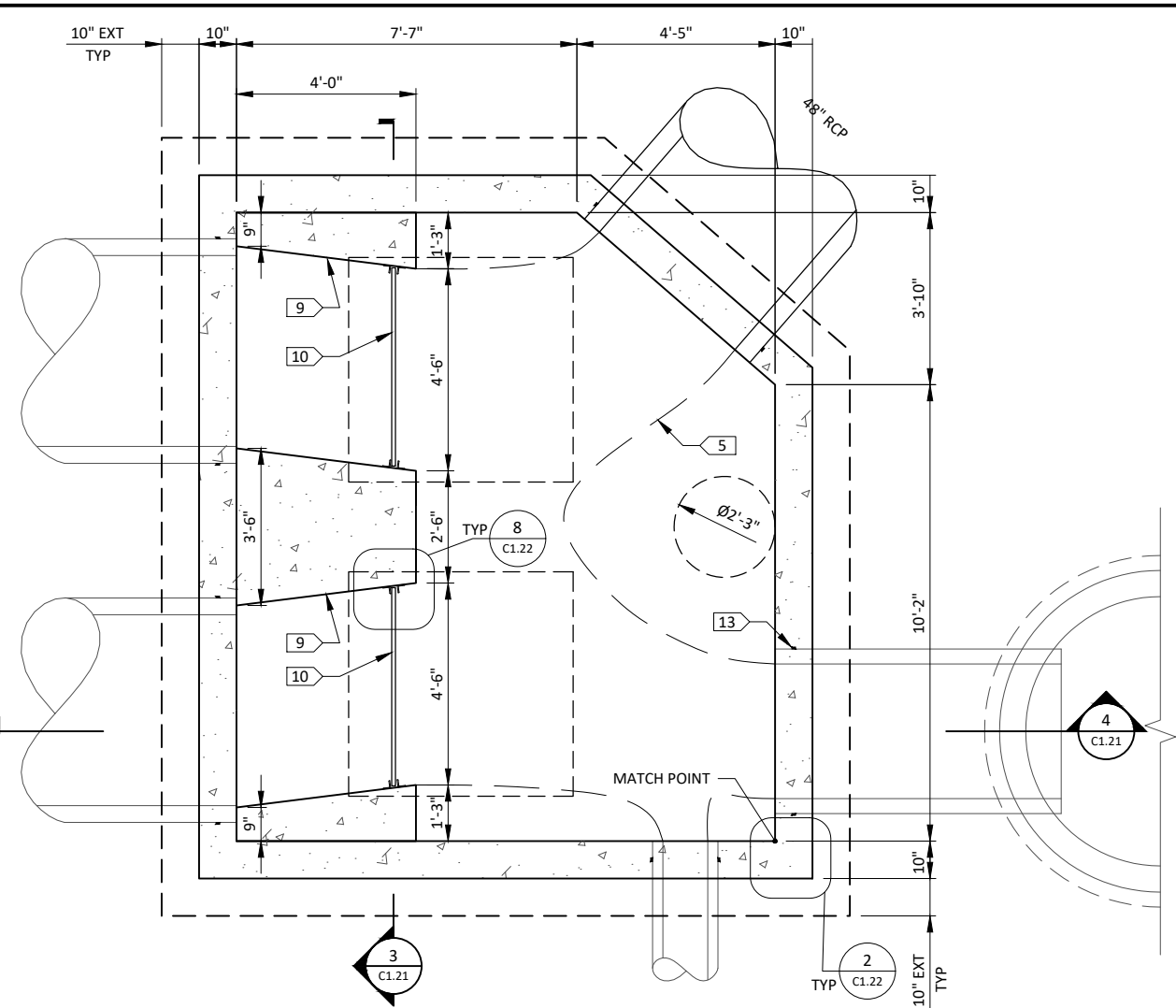
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
PROJECT SPECIFIC DETAILS

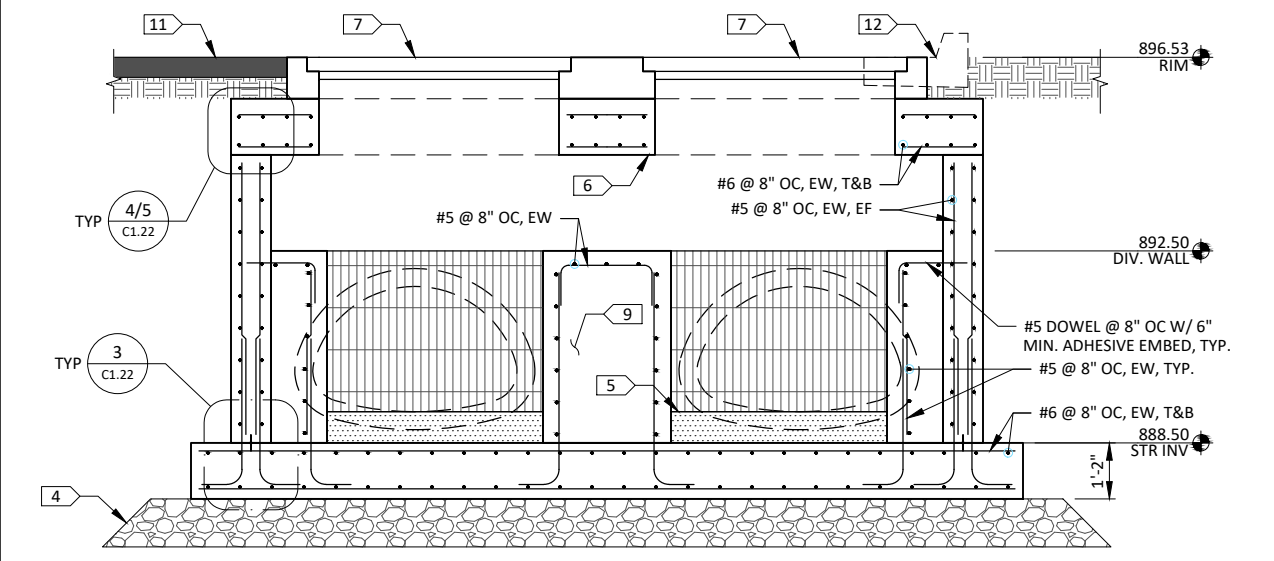
SHEET
C1.19



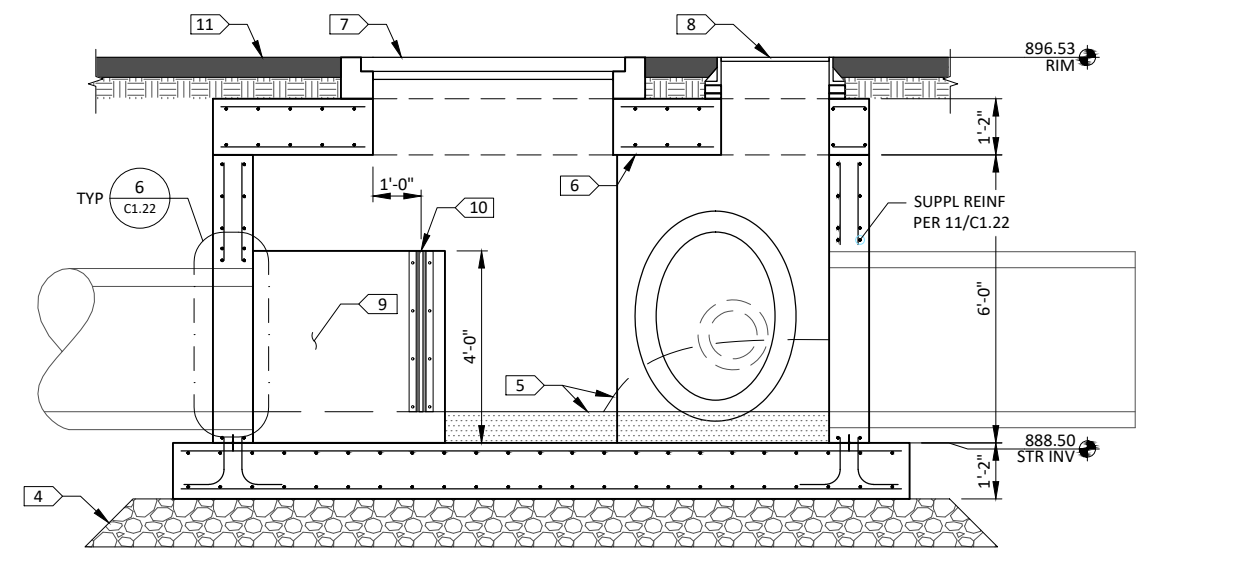
1 STORM STRUCTURE REMOVALS - PLAN
1/2" = 1'-0"



2 STORM STRUCTURE RECONSTRUCTION - PLAN
1/2" = 1'-0"



3 STORM STRUCTURE RECONSTRUCTION - SECTION
1/2" = 1'-0"



4 STORM STRUCTURE RECONSTRUCTION - SECTION
1/2" = 1'-0"

GENERAL NOTES:

1. SCALES SHOWN ARE BASED ON FULL SIZE 22X34 DRAWINGS. REDUCE SCALES BY 2 FOR 11X17 DRAWINGS.
2. PIPE PENETRATION LOCATIONS AND ELEVATIONS ARE APPROXIMATE, SEE PLAN AND PROFILE.
3. CONTRACTOR SHALL ESTABLISH AND MAINTAIN TEMPORARY FLOW DIVERSION SYSTEM PRIOR TO CONSTRUCTION OF NEW STORM STRUCTURE.
4. CONTRACTOR RESPONSIBLE FOR TEMPORARY EXCAVATION SUPPORT REQUIRED TO LIMIT IMPACTS TO SURROUNDING UTILITIES AND SURFACE FEATURES. EXCAVATION SUPPORT IS INCIDENTAL TO STORM STRUCTURE BID ITEM.
5. ALL WORK NOTED ON THIS SHEET SHALL BE PAID UNDER LUMP SUM STORM STRUCTURE BID ITEM.

KEYNOTES: X

1. DEMOLISH AND REMOVE EXISTING REINFORCED CONCRETE STORM STRUCTURE, MANHOLE RISER, ADJUSTING RINGS & CASTING.
2. PROTECT EXISTING PIPE DURING REMOVAL OF EXISTING STRUCTURE. IF DAMAGED DURING REMOVALS PROCESS, PROVIDE NEW PIPE IN-KIND.
3. SAWCUT AND REMOVE EXISTING RCP FLUSH WITH INSIDE FACE OF PROPOSED STRUCTURE. PARTIAL PIPE REMOVALS PAID FOR UNDER LUMP SUM BID ITEM. APPLY 1/2" MINIMUM THICK REPAIR MORTAR WITH ANTI-CORROSION BONDING AGENT TO END OF SAWN PIPE.
4. 12" GRANULAR FOUNDATION MATERIAL PER CITY TECHNICAL SPECIFICATION 2 - PIPELINE INSTALLATION.
5. LEAN CONCRETE INVERT & BENCHING, SLOPE TO OUTLET PIPES, TYP. PLACE RAISED BENCH TO MATCH SPRINGLINE OF EXISTING 36" RCP.
6. 12" PRECAST CONCRETE TOP SLAB. CAST HOLES AROUND PERIMETER OF SLAB FOR DOWELING TO SECURE TO STRUCTURE WALLS.
7. 60" x 60" HS20 RATED ALUMINUM ACCESS HATCH W/ DOUBLE LEAF DOOR. EMBED ACCESS HATCH IN 8" CONCRETE CURB, SEE DETAIL 7/C1.22
8. STANDARD MANHOLE ACCESS WITH ADJUSTING RINGS, CASTING, AND STEPS. SEE STANDARD PLATE NO. 3 MI-3 FOR REQUIREMENTS.
9. CAST-IN-PLACE CONCRETE DIVIDER WALLS, VARYING THICKNESS, TYP.
10. ALUMINUM BAR GRATING SCREEN, TYP. SEE DETAIL 9 & 10/C1.22 FOR REQUIREMENTS.
11. BITUMINOUS PAVEMENT REPLACEMENT, TYP. SEE C6 SERIES.
12. CONCRETE CURB & GUTTER REPLACEMENT. SEE C6 SERIES. INSTALL 1/2" EXP JOINT MATERIAL WHERE CURB & GUTTER IS CAST AGAINST ACCESS HATCH CURB.
13. CAST STRUCTURE WALLS AROUND IN-PLACE SEWER PIPE, TYP. SEE DETAIL 6/C1.22 FOR REQUIREMENTS.

LEGEND:



© Bolton & Menk, Inc. 2024. All Rights Reserved. 1/24/2024 11:35:53 AM C:\3D\13135353\C1.22.dwg 5/7/2024 8:45:14 AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Eric Leagjeld
ERIC LEAGJELD
LIC. NO. 40430 DATE 04/01/2024



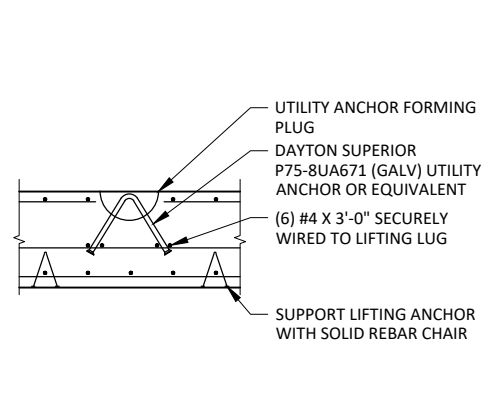
3507 HIGH POINT DRIVE NORTH,
BLDG. 1 SUITE E130
OAKDALE, MN 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

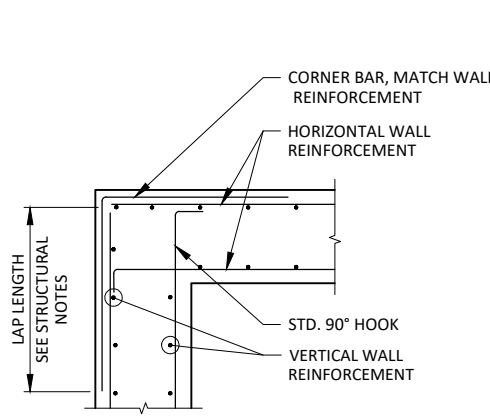
DESIGNED	NO.	ISSUED FOR	DATE
TEP	0	BID	04/01/2024
DRAWN		CON	05/06/2024
CHECKED			
EEL			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
STORM STRUCTURE RECONSTRUCTION - PLAN

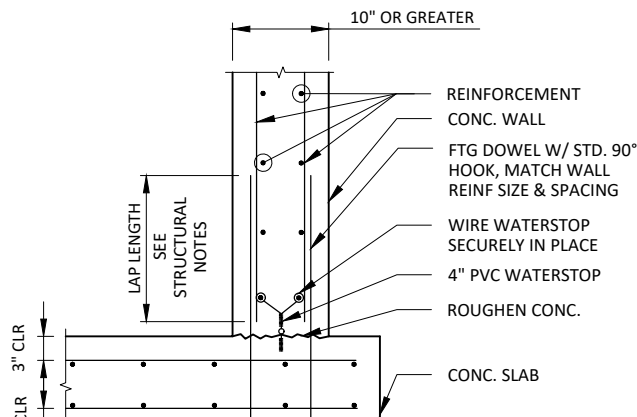
SHEET
C1.21



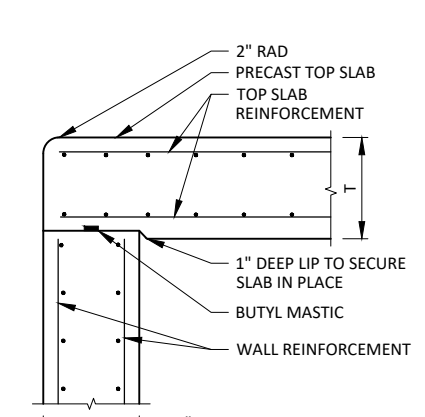
1 SLAB LIFTING ANCHOR DETAIL
C1.22 N.T.S.



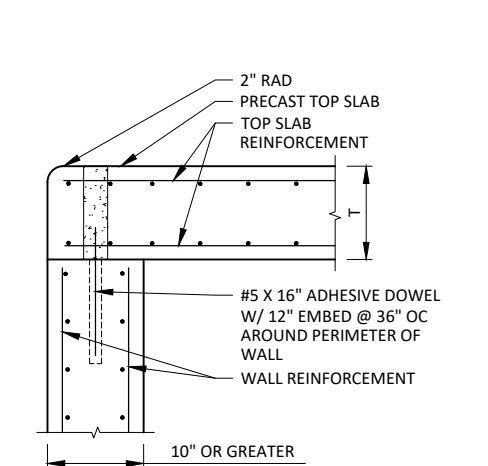
2 WALL CORNER REINFORCEMENT
C1.22 N.T.S.



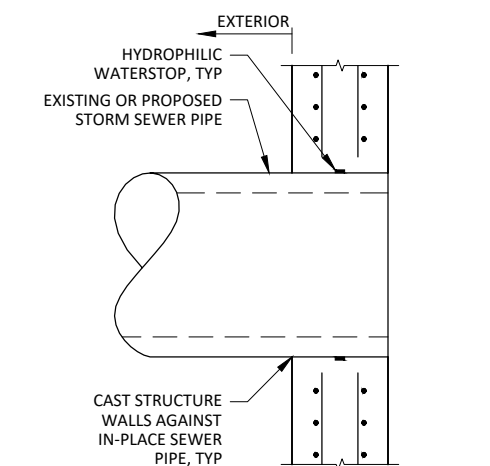
3 BASE SLAB & WALL JOINT DETAIL
C1.22 N.T.S.



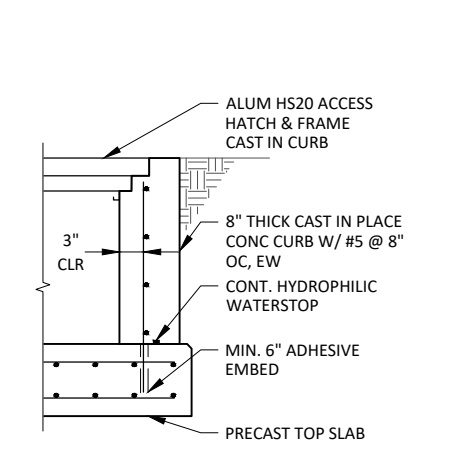
4 WALL & TOP SLAB JOINT DETAIL - ALT. A
C1.22 N.T.S.



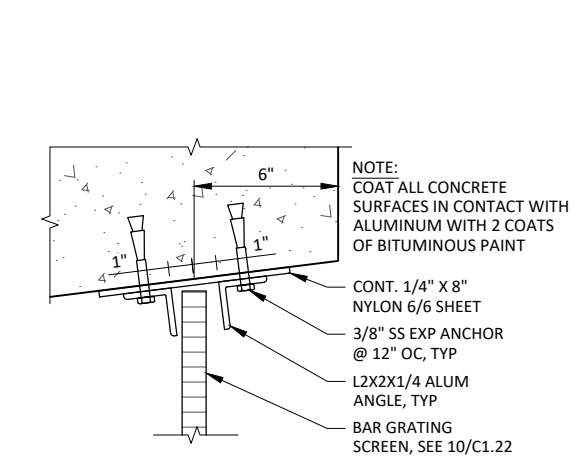
5 WALL & TOP SLAB JOINT DETAIL - ALT. B
C1.22 N.T.S.



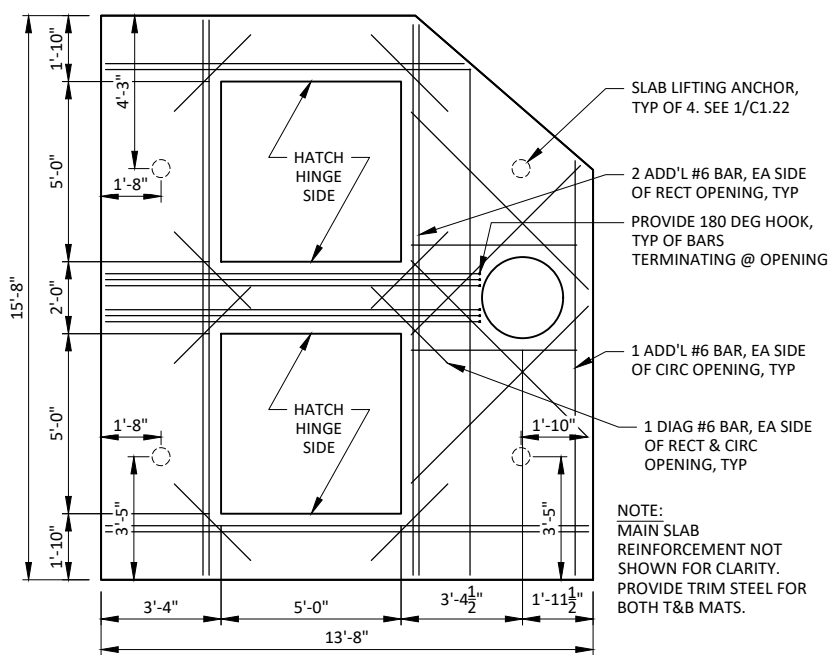
6 WALL PENETRATION - SEWER PIPES
C1.22 N.T.S.



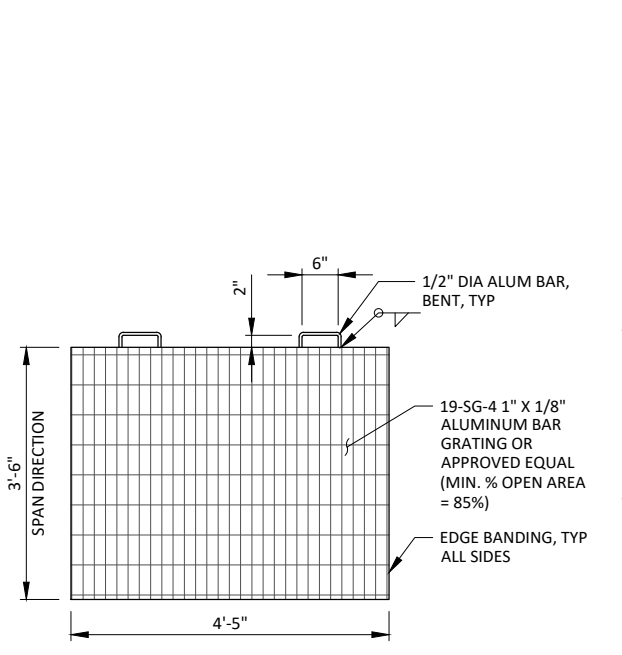
7 ACCESS HATCH CURB
C1.22 N.T.S.



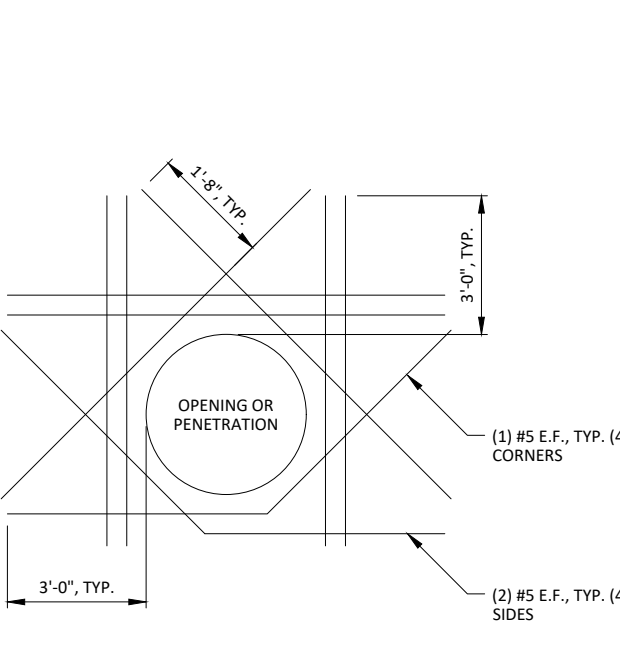
8 BAR GRATING GUIDE MOUNTING
C1.22 3" = 1'-0"



9 TOP SLAB REINFORCING PLAN
C1.22 3/8" = 1'-0"



10 BAR GRATING SCREEN
C1.22 3/4" = 1'-0"



11 WALL PENETRATION REINFORCEMENT
C1.22 N.T.S.

CONCRETE NOTES:

1. LAP SPLICES AND 90 DEGREE END HOOKS SHALL BE AS SHOWN BELOW UNLESS NOTED. WHEN BARS OF TWO DIFFERENT SIZES ARE SPLICED, THE LONGER LAP LENGTH SHALL APPLY.

BAR SIZE	SLAB, WALL, COLUMN		BEAMS		90° HOOK
	BAR LAP	TOP BAR	BAR LAP	TOP BAR	
#3	19 IN.	24 IN.	28 IN.	36 IN.	6 IN.
#4	25 IN.	32 IN.	37 IN.	48 IN.	8 IN.
#5	31 IN.	40 IN.	46 IN.	60 IN.	10 IN.
#6	37 IN.	48 IN.	56 IN.	72 IN.	12 IN.

* TOP BAR LAP SPLICES ARE HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 IN. OF CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE

2. REINFORCING BARS SHALL HAVE THE FOLLOWING CONC. COVER UNLESS NOTED OTHERWISE.

FOOTINGS AND OTHER UNFORMED SURFACES	3"
CONCRETE EXPOSED TO EARTH, WEATHER OR FLUIDS	2"
#6 BARS OR LARGER	1-1/2"
#5 BARS OR SMALLER	1-1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	3/4"
BEAMS, COLUMNS, TIES, SPIRALS AND STIRRUPS	3/4"
SLABS, WALLS & JOISTS	3/4"

3. CONCRETE SHALL BE PLACED WITHOUT CONSTRUCTION JOINTS EXCEPT WHERE SPECIFICALLY SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.

4. ALL CONSTRUCTION JOINTS IN WALLS AND SLABS OF LIQUID CONTAINING STRUCTURES SHALL CONTAIN WATERSTOPS.

5. CAST-IN-PLACE CONCRETE SHALL NOT BE PLACED IN STANDING WATER, ON FROZEN SOIL OR ON FROZEN CONCRETE.

MATERIAL NOTES:

REINFORCED CONCRETE

CONCRETE:	4000 PSI @ 28 DAYS, UNO AIR CONTENT: 5.0% TO 7.0% W/C: 0.42
REINFORCEMENT BARS:	ASTM A615, GRADE 60 ASTM A706, GRADE 60 LOW-ALLOY ASTM A1064, (Fy = 65,000 PSI)
REINFORCEMENT BAR ADHESIVE:	HILTI RE 500-V3 APPROVED EQUAL
MECHANICAL ANCHORS:	HILTI KWIK BOLT TZ, SS316

ALUMINUM

ANGLES, CHANNELS, BEAMS	ASTM B221, 6061-T6
-------------------------	--------------------

DESIGN CRITERIA & LOADING:

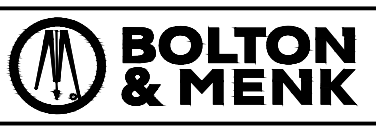
1. CODE: 2021 INTERNATIONAL BUILDING CODE (IBC).

2. DESIGN LOADING

LOAD TYPE	VALUE
DEAD LOADS (D)	CALCULATED
LIVE LOADS (L)	
ROOF TRUCK	16,000 LBS
FLUID (F)	
WATER	62.4 PCF
LATERAL LOADS (H)	
DESIGN WATER TABLE	890.53
100-YR. FLOOD ELEVATION	897.8
BACKFILL FRICTION ANGLE	28 DEGREES
Ko	0.531
SOIL UNIT WEIGHT, DRY	120 PCF

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:33:53 AM C:\3535\C122.dwg 5/7/2024 8:46:22 AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Eric Leagjeld
ERIC LEAGJELD
LIC. NO. 40430 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH,
BLDG. 1 SUITE E130
OAKDALE, MN 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
TEP	0	BID	04/01/2024
DRAWN	0	CON	05/06/2024
CHECKED			
EEL			
CLIENT PROJ. NO.			
24-07			

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
STORM STRUCTURE RECONSTRUCTION - DETAILS

SHEET
C1.22

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN R100001 (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: <https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf>

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

1. Contact information and training documentation for Construction SWPPP Manager and BMP Installer,
2. There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:
 - a. Types and/or Locations of BMPs
 - b. Material Storage and Spill Response
 - c. Fueling Plans
 - d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and
 - e. Project Phasing
3. It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or
4. The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

- a. Inspections of areas with permanent cover to be reduced to once per month,
- b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
- c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

1. Substantial Completion has been reached and no ground disturbing activities are anticipated.
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.

3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
4. All sediment has been removed from conveyance systems
5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	7 calendar days
--	-----------------

SITE INSPECTION INTERVAL:

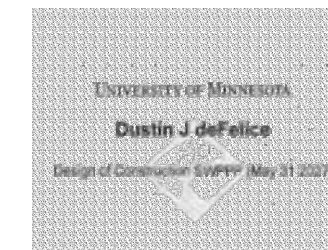
A trained person shall routinely inspect the entire construction site during active construction at an interval of no more than:	7 calendar days
--	-----------------

SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

1)	Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
2)	Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3)	Does any portion of this site discharge to a Calcareous fen.	NO
4)	Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5)	Have any Karst features have been identified in the project vicinity?	NO
6)	Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7)	Has the MN DNR promulgated "work in water restrictions" for any Public Water this site discharges to during fish spawning?	NO

TYPE OF PERMIT	PERMITTING AGENCY	PERMIT STATUS AND CONDITIONS
Construction Stormwater NPDES	MPCA	In progress
Stormwater Permit	CCWD	In progress

SWPPP DESIGNER TRAINING DOCUMENTATION:



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:35:52 AM C:\313552701\DWG\17/2024-8-46-34-AM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.			
24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STORMWATER POLLUTION PREVENTION PLAN
 PROJECT NARRATIVE - SWPPP

SHEET

C2.02

EROSION CONTROL LEGEND

- MS — MACHINE SLICED SILT FENCE
- HI — HAND INSTALLED SILT FENCE
- RIP RAP
- INLET PROTECTION
- DITCH CHECK - BIOLOG
- CULVERT / PIPE PROTECTION
- EXISTING/PROPOSED DRAINAGE FLOW
- BLANKET
- HYDROMULCH
- TURF REINFORCEMENT MAT (TRM)

INFILTRATION CELL NOTES:

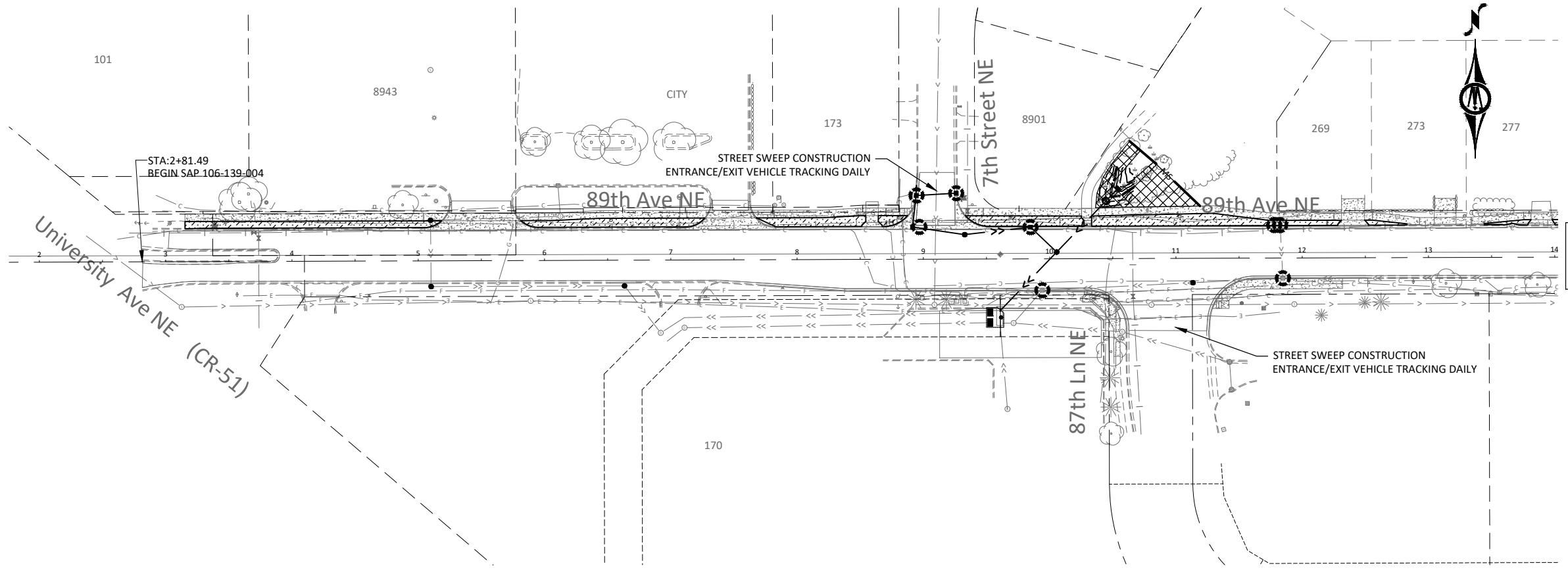
1. KEEP INFILTRATION CELL OFFLINE BY RESTRICTING STORM WATER INFLOW UNTIL ALL UP GRADIENT AREAS HAVE BEEN STABILIZED AND IMPERVIOUS SURFACES HAVE BEEN CLEARED OF CONSTRUCTION SEDIMENT.

TEMPORARY RESTORATION NOTES:

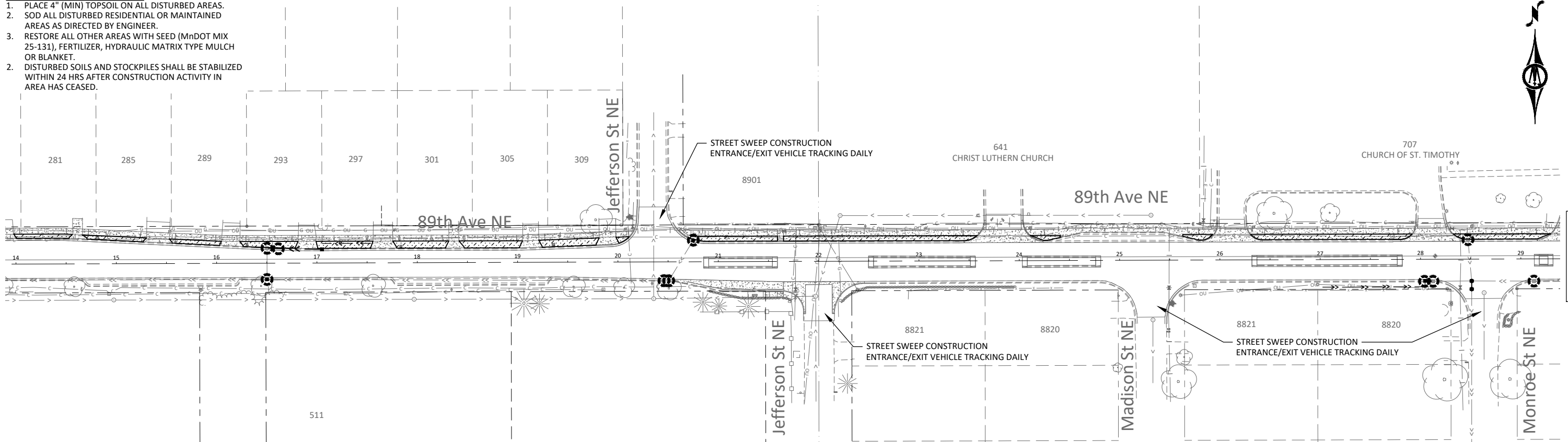
1. HYDRAULIC MATRIX, TYPE MULCH (NO SEED) ALL DISTURBED AREAS AS REQUIRED PRIOR TO PERMANENT RESTORATION.
2. DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.

PERMANENT RESTORATION NOTES:

1. PLACE 4" (MIN) TOPSOIL ON ALL DISTURBED AREAS.
2. SOD ALL DISTURBED RESIDENTIAL OR MAINTAINED AREAS AS DIRECTED BY ENGINEER.
3. RESTORE ALL OTHER AREAS WITH SEED (MnDOT MIX 25-131), FERTILIZER, HYDRAULIC MATRIX TYPE MULCH OR BLANKET.
2. DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.



89TH AVENUE NE

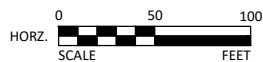


SEE ABOVE

SEE BELOW

SEE SHEET C2.05

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:33:53 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



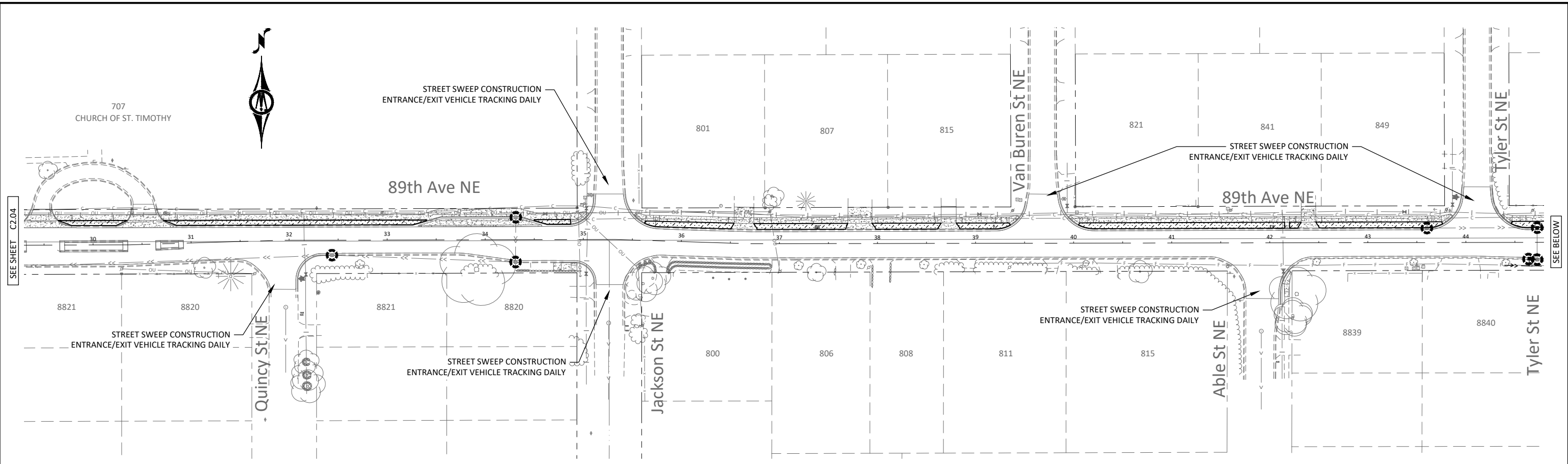
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

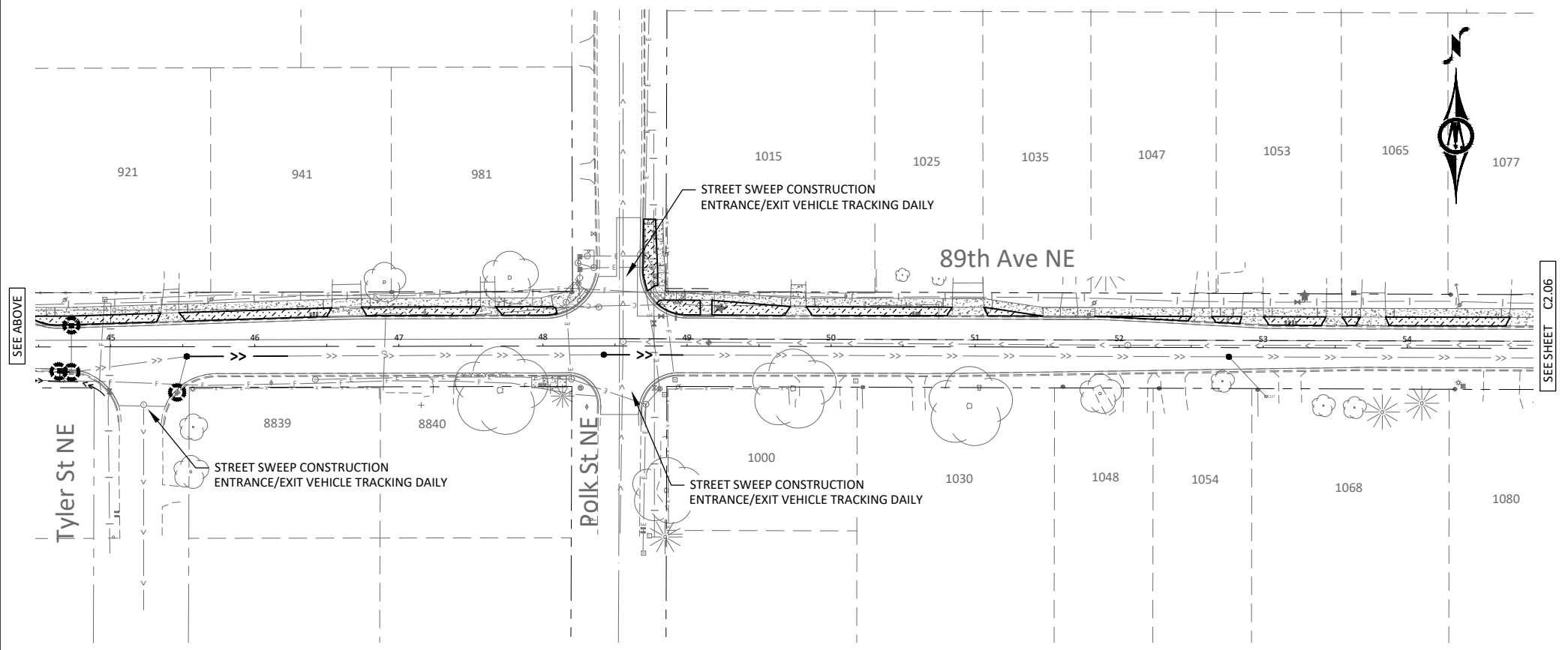
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 TEMPORARY AND PERMANENT EROSION CONTROL PLAN
 89TH AVENUE NE

SHEET
C2.04



89TH AVENUE NE

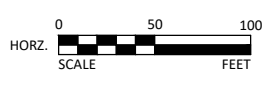


EROSION CONTROL LEGEND

MS	MACHINE SLICED SILT FENCE
HI	HAND INSTALLED SILT FENCE
	RIP RAP
	INLET PROTECTION
	DITCH CHECK - BIOLOG
	CULVERT / PIPE PROTECTION
	EXISTING/PROPOSED DRAINAGE FLOW
	BLANKET
	HYDROMULCH
	TURF REINFORCEMENT MAT (TRM)

- INFILTRATION CELL NOTES:**
- KEEP INFILTRATION CELL OFFLINE BY RESTRICTING STORM WATER INFLOW UNTIL ALL UP GRADIENT AREAS HAVE BEEN STABILIZED AND IMPERVIOUS SURFACES HAVE BEEN CLEARED OF CONSTRUCTION SEDIMENT.
- TEMPORARY RESTORATION NOTES:**
- HYDRAULIC MATRIX, TYPE MULCH (NO SEED) ALL DISTURBED AREAS AS REQUIRED PRIOR TO PERMANENT RESTORATION.
 - DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.
- PERMANENT RESTORATION NOTES:**
- PLACE 4" (MIN) TOPSOIL ON ALL DISTURBED AREAS. SOD ALL DISTURBED RESIDENTIAL OR MAINTAINED AREAS AS DIRECTED BY ENGINEER.
 - RESTORE ALL OTHER AREAS WITH SEED (MnDOT MIX 25-131), FERTILIZER, HYDRAULIC MATRIX TYPE MULCH OR BLANKET.
 - DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/23 13:55:20.dwg 5/7/2024 8:45:39 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



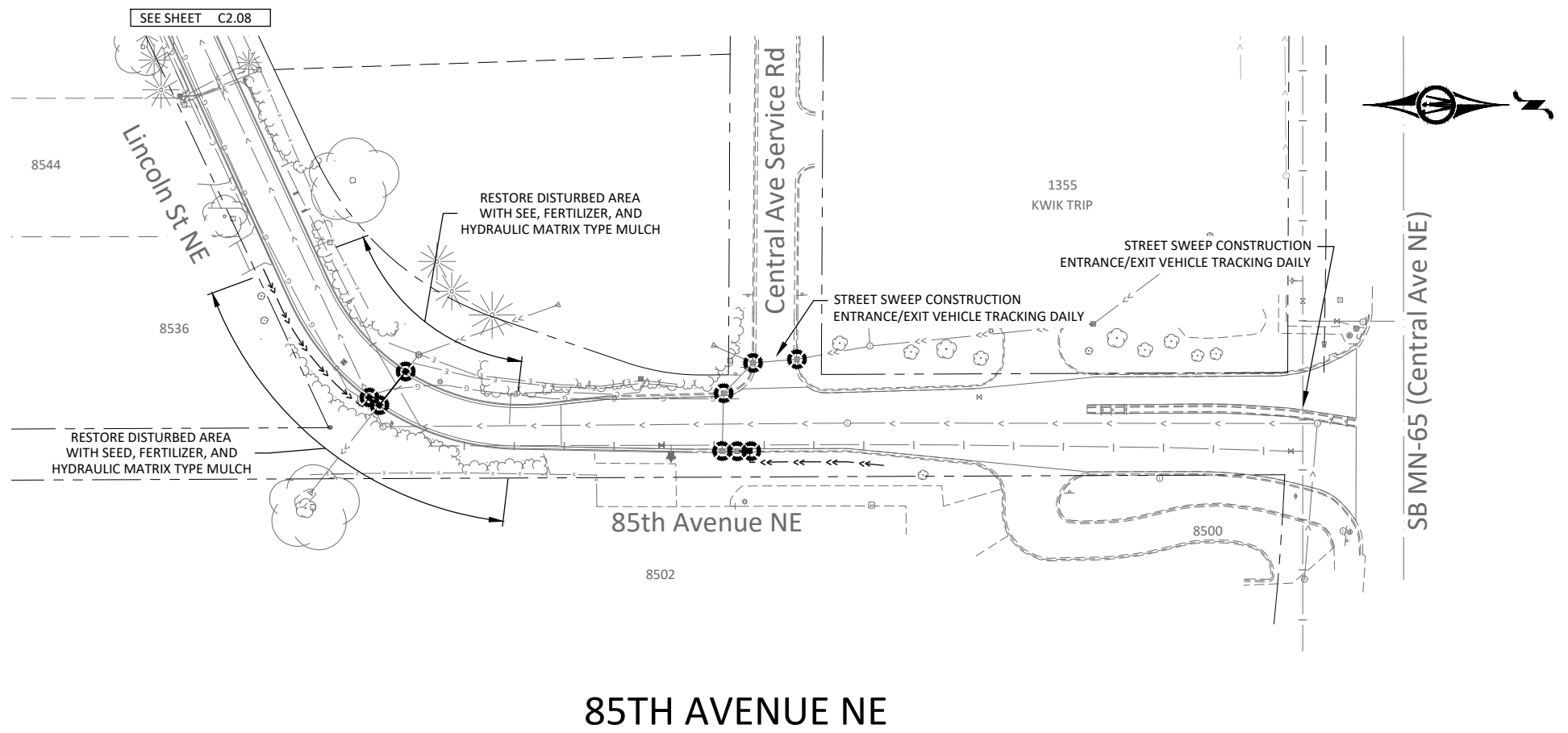
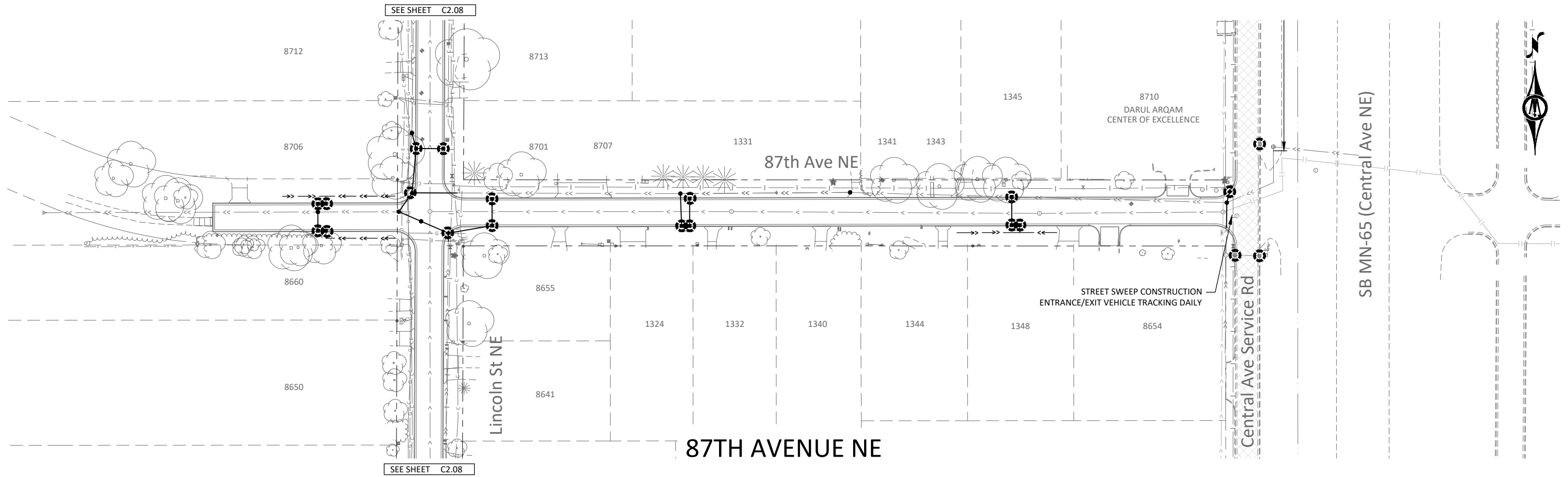
3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024
CHECKED	TJP			
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
TEMPORARY AND PERMANENT EROSION CONTROL PLAN
89TH AVENUE NE

SHEET
C2.05

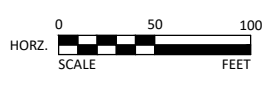


EROSION CONTROL LEGEND

MS	MACHINE SLICED SILT FENCE
HI	HAND INSTALLED SILT FENCE
	RIP RAP
	INLET PROTECTION
	DITCH CHECK - BIOLOG
	CULVERT / PIPE PROTECTION
	EXISTING/PROPOSED DRAINAGE FLOW
	BLANKET
	HYDROMULCH
	TURF REINFORCEMENT MAT (TRM)

- INFILTRATION CELL NOTES:**
- KEEP INFILTRATION CELL OFFLINE BY RESTRICTING STORM WATER INFLOW UNTIL ALL UP GRADIENT AREAS HAVE BEEN STABILIZED AND IMPERVIOUS SURFACES HAVE BEEN CLEARED OF CONSTRUCTION SEDIMENT.
- TEMPORARY RESTORATION NOTES:**
- HYDRAULIC MATRIX, TYPE MULCH (NO SEED) ALL DISTURBED AREAS AS REQUIRED PRIOR TO PERMANENT RESTORATION.
 - DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.
- PERMANENT RESTORATION NOTES:**
- PLACE 4" (MIN) TOPSOIL ON ALL DISTURBED AREAS.
 - SOD ALL DISTURBED RESIDENTIAL OR MAINTAINED AREAS AS DIRECTED BY ENGINEER.
 - RESTORE ALL OTHER AREAS WITH SEED (MnDOT MIX 25-131), FERTILIZER, HYDRAULIC MATRIX TYPE MULCH OR BLANKET.
 - DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.

© Bolton & Menk, Inc. 2024. All Rights Reserved. 13355C02.dwg 5/7/2024 8:42:25 AM



HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA









2024 SOUTHWEST AREA STREET RECONSTRUCTION

TEMPORARY AND PERMANENT EROSION CONTROL PLAN

87TH AVENUE NE AND 85TH AVENUE NE

SHEET
C2.07

EROSION CONTROL LEGEND

- MS — MACHINE SLICED SILT FENCE
- HI — HAND INSTALLED SILT FENCE
-  RIP RAP
-  INLET PROTECTION
-  DITCH CHECK - BIOLOG
-  CULVERT / PIPE PROTECTION
-  EXISTING/PROPOSED DRAINAGE FLOW
-  BLANKET
-  HYDROMULCH
-  TURF REINFORCEMENT MAT (TRM)

INFILTRATION CELL NOTES:

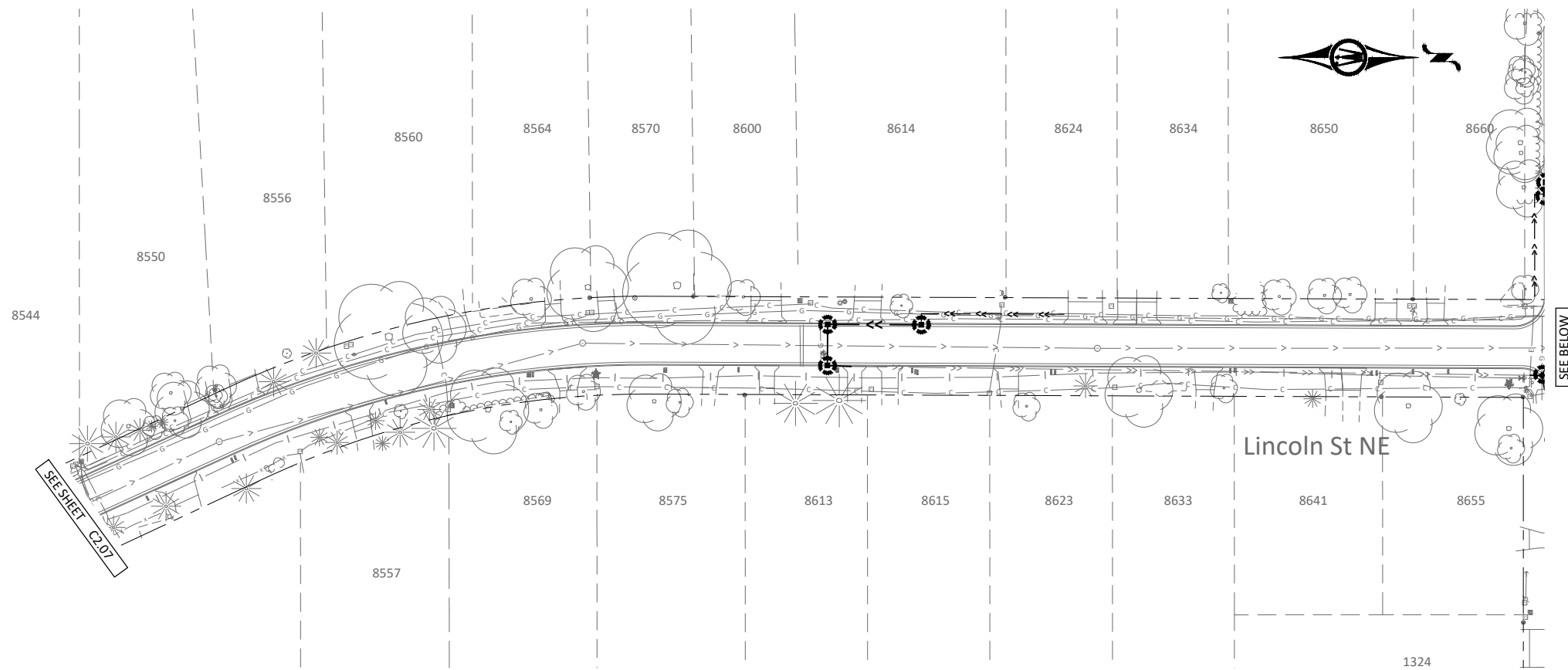
1. KEEP INFILTRATION CELL OFFLINE BY RESTRICTING STORM WATER INFLOW UNTIL ALL UP GRADIENT AREAS HAVE BEEN STABILIZED AND IMPERVIOUS SURFACES HAVE BEEN CLEARED OF CONSTRUCTION SEDIMENT.

TEMPORARY RESTORATION NOTES:

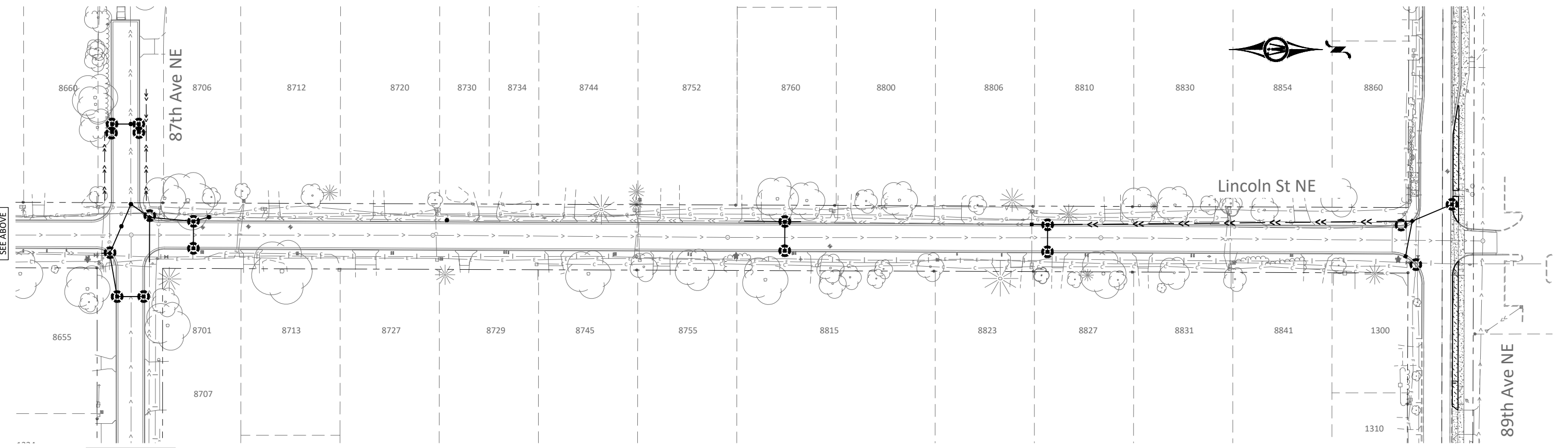
1. HYDRAULIC MATRIX, TYPE MULCH (NO SEED) ALL DISTURBED AREAS AS REQUIRED PRIOR TO PERMANENT RESTORATION.
2. DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.

PERMANENT RESTORATION NOTES:

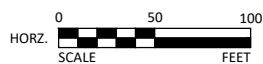
1. PLACE 4" (MIN) TOPSOIL ON ALL DISTURBED AREAS.
2. SOD ALL DISTURBED RESIDENTIAL OR MAINTAINED AREAS AS DIRECTED BY ENGINEER.
3. RESTORE ALL OTHER AREAS WITH SEED (MNDOT MIX 25-131), FERTILIZER, HYDRAULIC MATRIX TYPE MULCH OR BLANKET.
2. DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.



LINCOLN ST NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. 133555207.dwg 5/7/2024 8:45:34 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

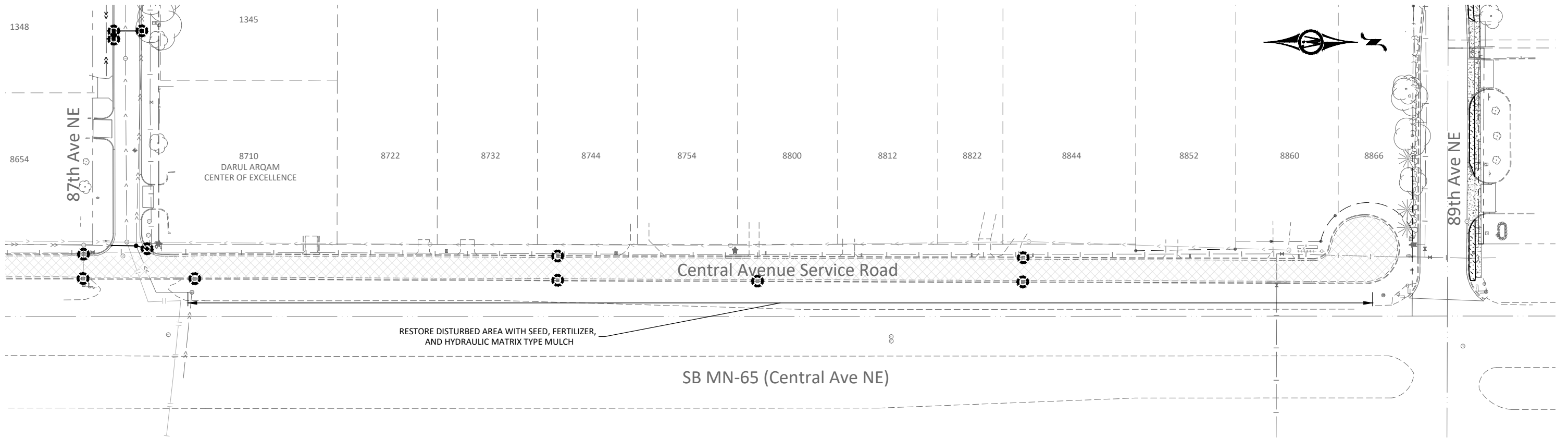


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 TEMPORARY AND PERMANENT EROSION CONTROL PLAN
 LINCOLN STREET NE

SHEET
C2.08



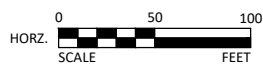
CENTRAL AVENUE SERVICE ROAD

EROSION CONTROL LEGEND

- MS — MACHINE SLICED SILT FENCE
- HI — HAND INSTALLED SILT FENCE
- RIP RAP
- INLET PROTECTION
- DITCH CHECK - BIOLOG
- CULVERT / PIPE PROTECTION
- EXISTING/PROPOSED DRAINAGE FLOW
- BLANKET
- HYDROMULCH
- TURF REINFORCEMENT MAT (TRM)

- INFILTRATION CELL NOTES:**
- KEEP INFILTRATION CELL OFFLINE BY RESTRICTING STORM WATER INFLOW UNTIL ALL UP GRADIENT AREAS HAVE BEEN STABILIZED AND IMPERVIOUS SURFACES HAVE BEEN CLEARED OF CONSTRUCTION SEDIMENT.
- TEMPORARY RESTORATION NOTES:**
- HYDRAULIC MATRIX, TYPE MULCH (NO SEED) ALL DISTURBED AREAS AS REQUIRED PRIOR TO PERMANENT RESTORATION.
 - DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.
- PERMANENT RESTORATION NOTES:**
- PLACE 4" (MIN) TOPSOIL ON ALL DISTURBED AREAS.
 - SOD ALL DISTURBED RESIDENTIAL OR MAINTAINED AREAS AS DIRECTED BY ENGINEER.
 - RESTORE ALL OTHER AREAS WITH SEED (MndOT MIX 25-131), FERTILIZER, HYDRAULIC MATRIX TYPE MULCH OR BLANKET.
 - DISTURBED SOILS AND STOCKPILES SHALL BE STABILIZED WITHIN 24 HRS AFTER CONSTRUCTION ACTIVITY IN AREA HAS CEASED.

© Bolton & Menk, Inc. 2024. All Rights Reserved. P:\BOLTON\133535\CD\3D\133535207.dwg 5/7/2024 8:46:42 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

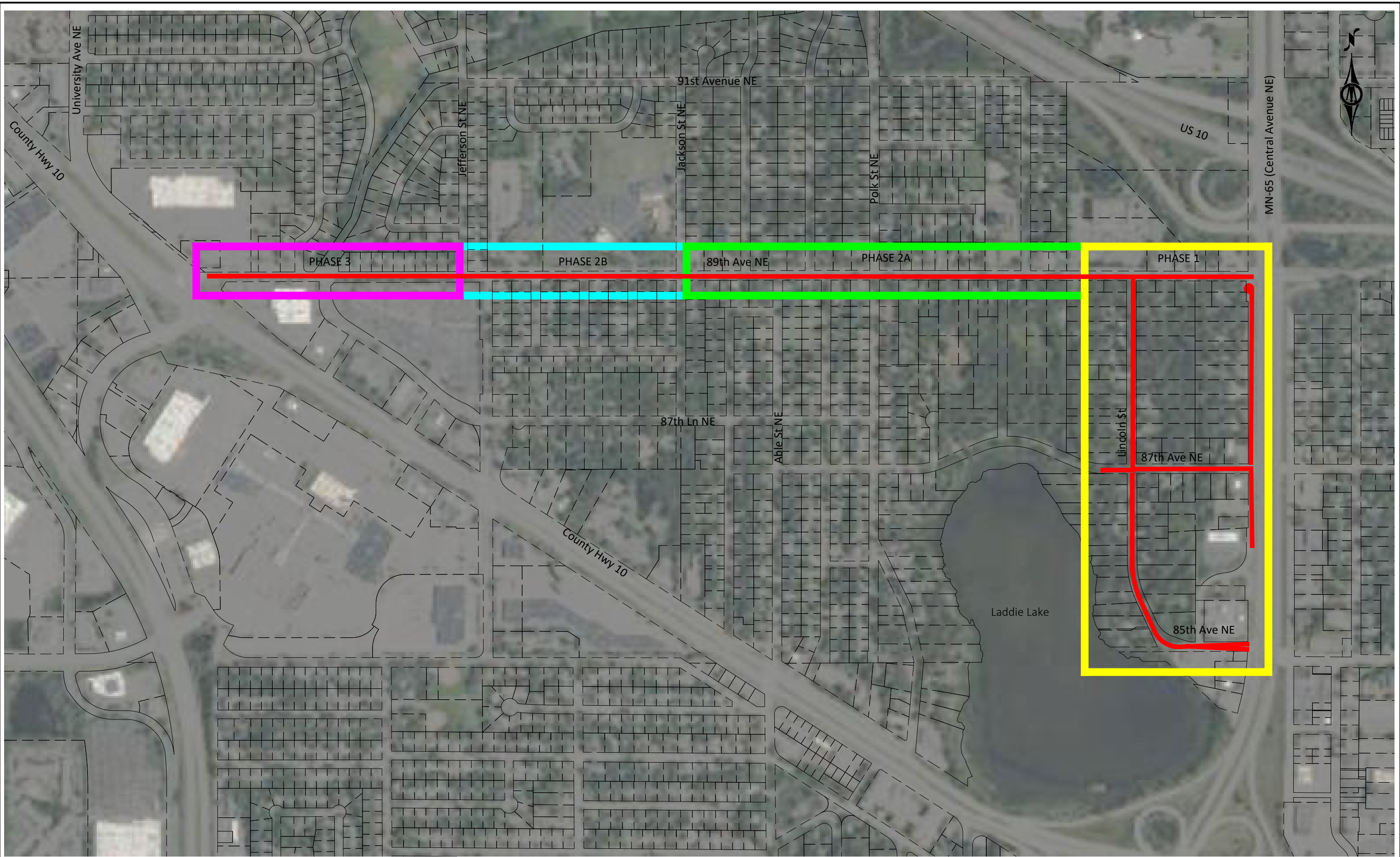


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 TEMPORARY AND PERMANENT EROSION CONTROL PLAN
 CENTRAL AVENUE SERVICE ROAD

SHEET
C2.09



© Bolton & Menk, Inc. 2024. All Rights Reserved.
 P:\BLAINE\13353\CD\3D\MISC\TRAFFIC CONTROL 1.dwg 5/7/2024 8:47:07 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED
 BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED
 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



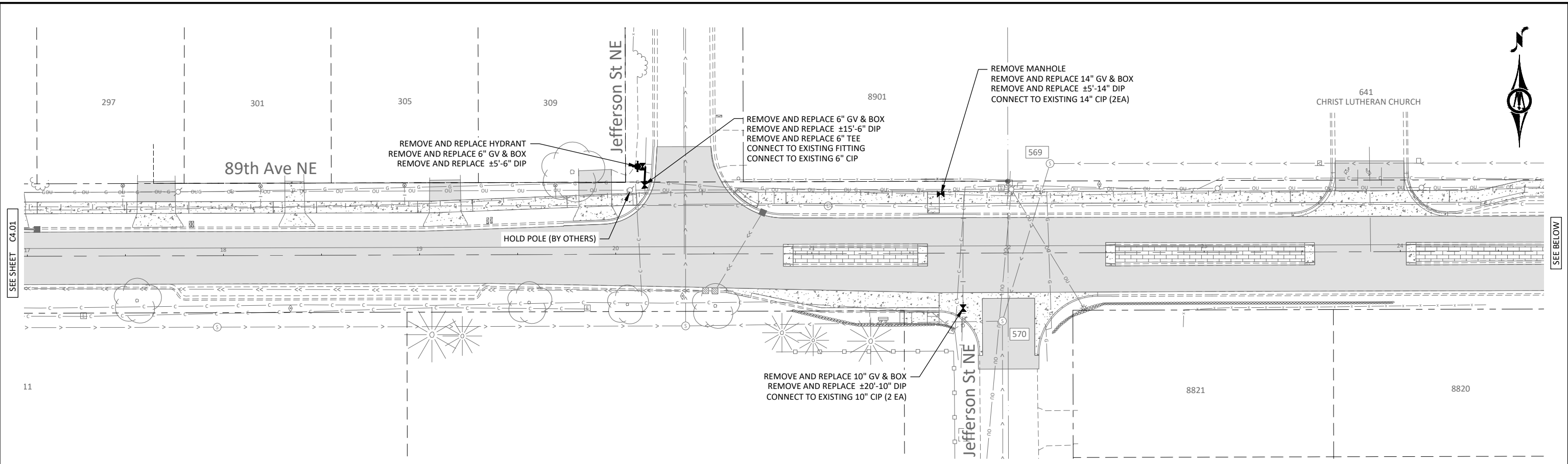
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

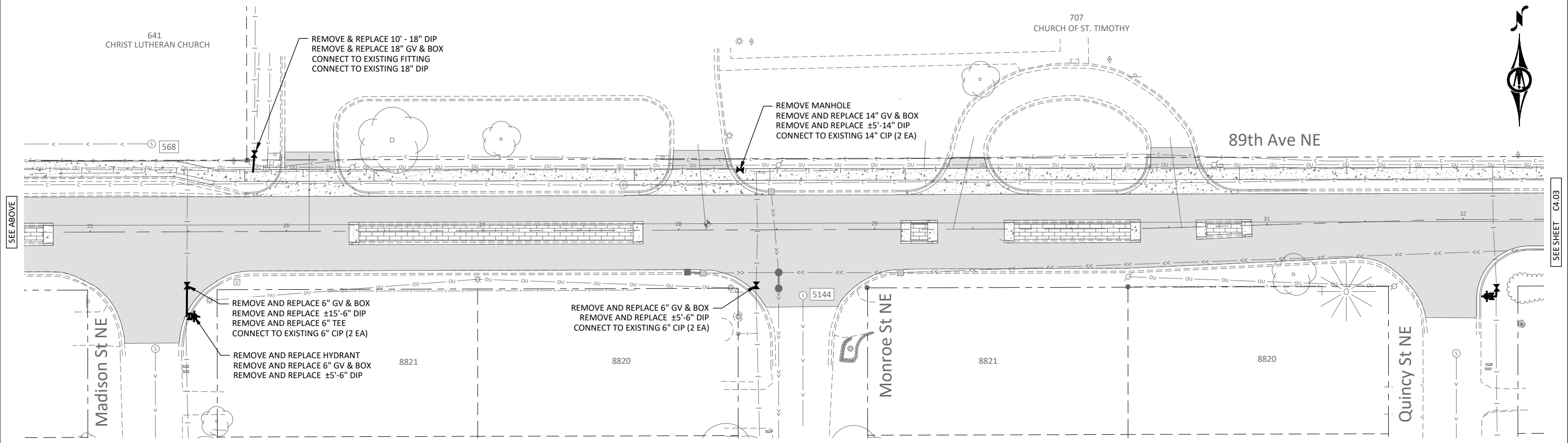
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION

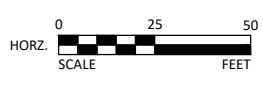
SHEET



89TH AVENUE NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:33:53 AM C:\33535\C4.01.dwg 5/7/2024 8:48:40 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



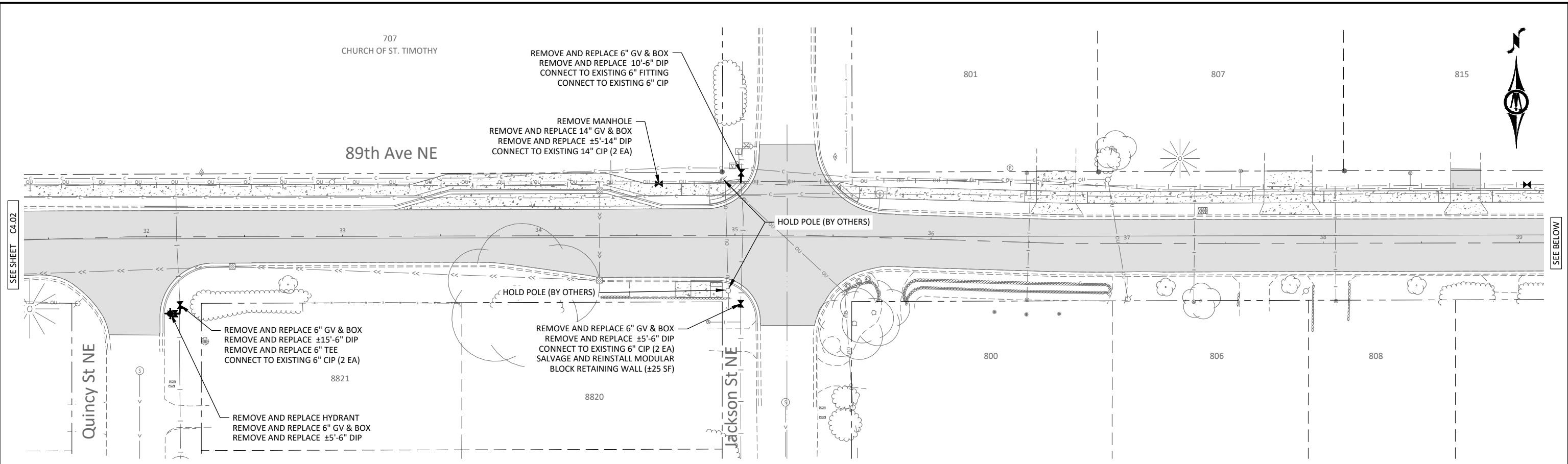
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

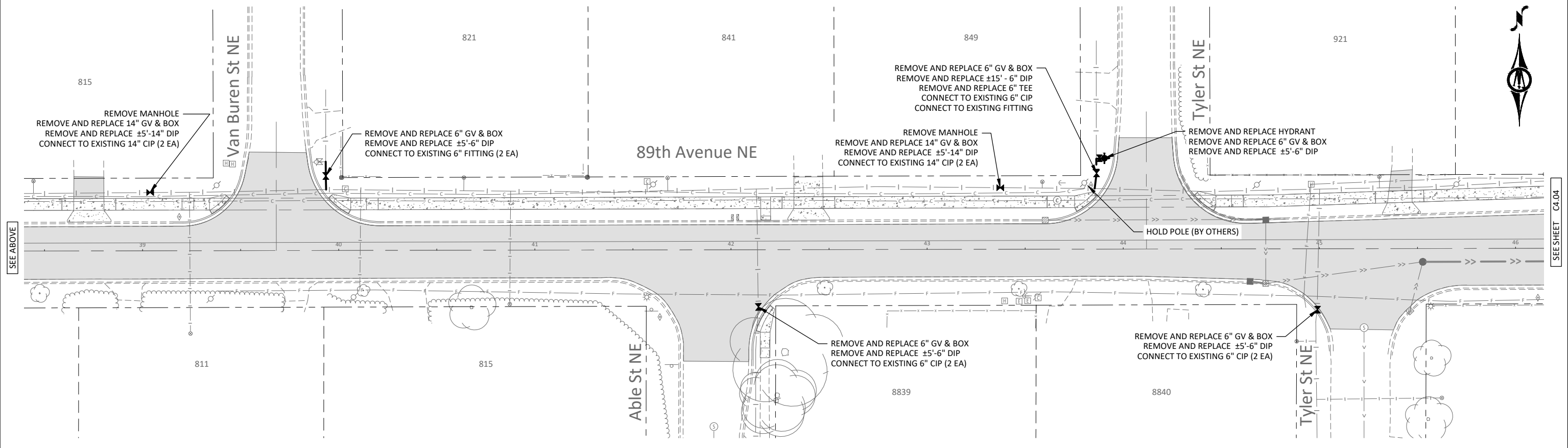
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 SANITARY & WATER IMPROVEMENTS
 89TH AVENUE NE

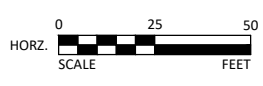
SHEET
 C4.02



89TH AVENUE NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. P:\BOLTON\133535\CAD\3D\133535-C4.04.dwg 5/7/2024 8:49:05 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



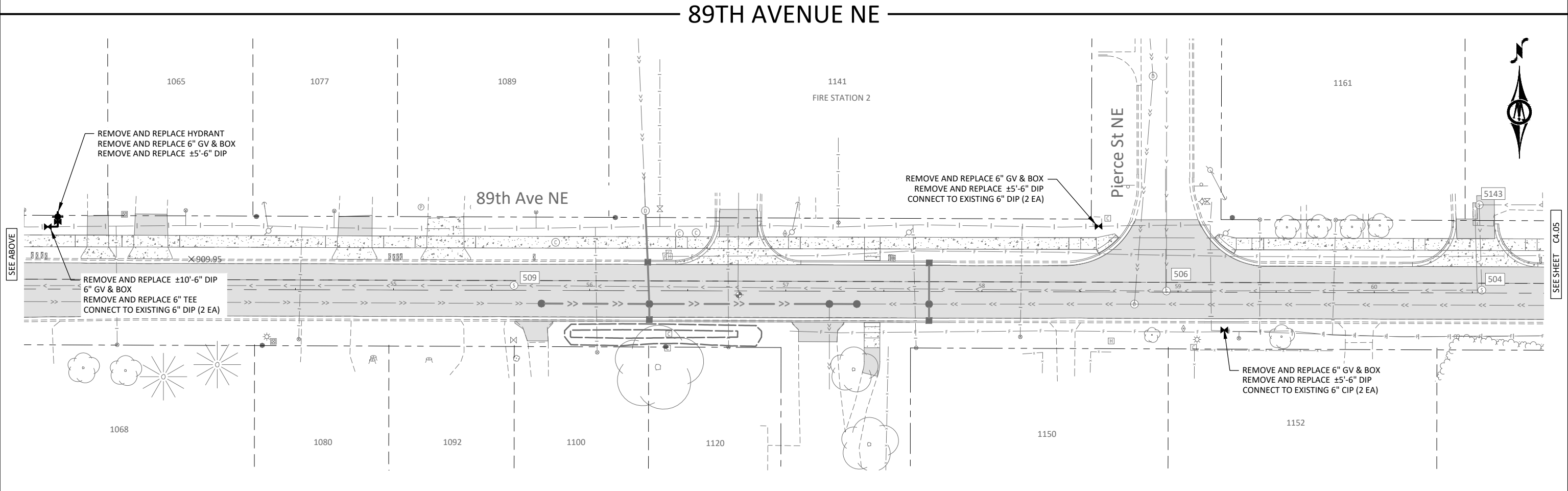
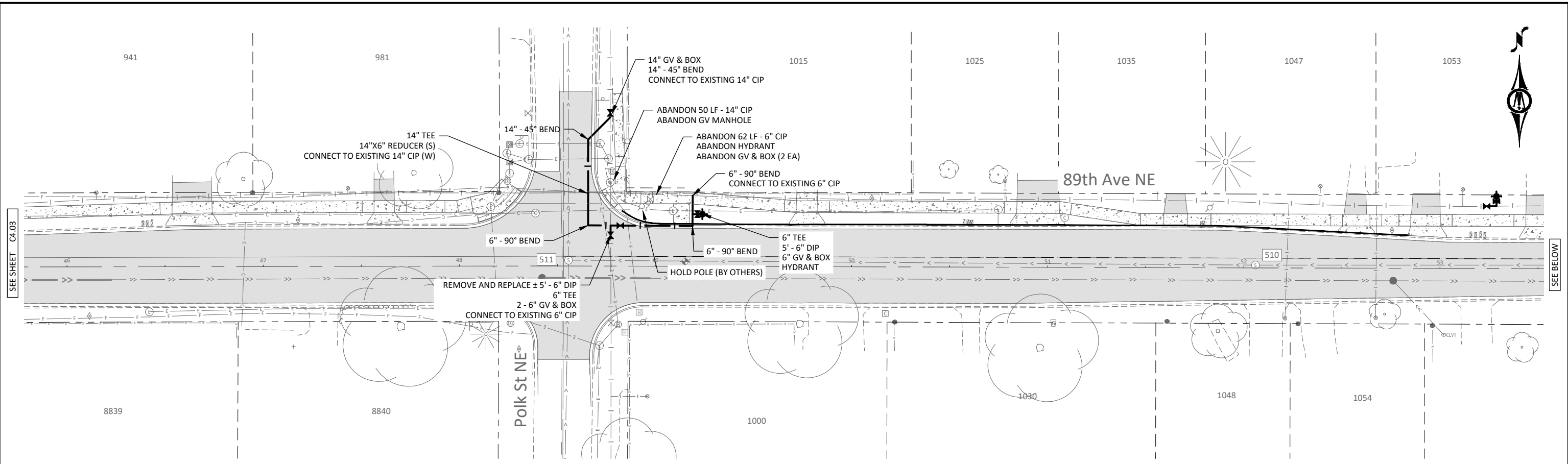
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 SANITARY & WATER IMPROVEMENTS
 89TH AVENUE NE

SHEET
 C4.03



89TH AVENUE NE

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 10:33:53 AM C:\33535\C4.04.dwg 5/7/2024 8:49:30 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



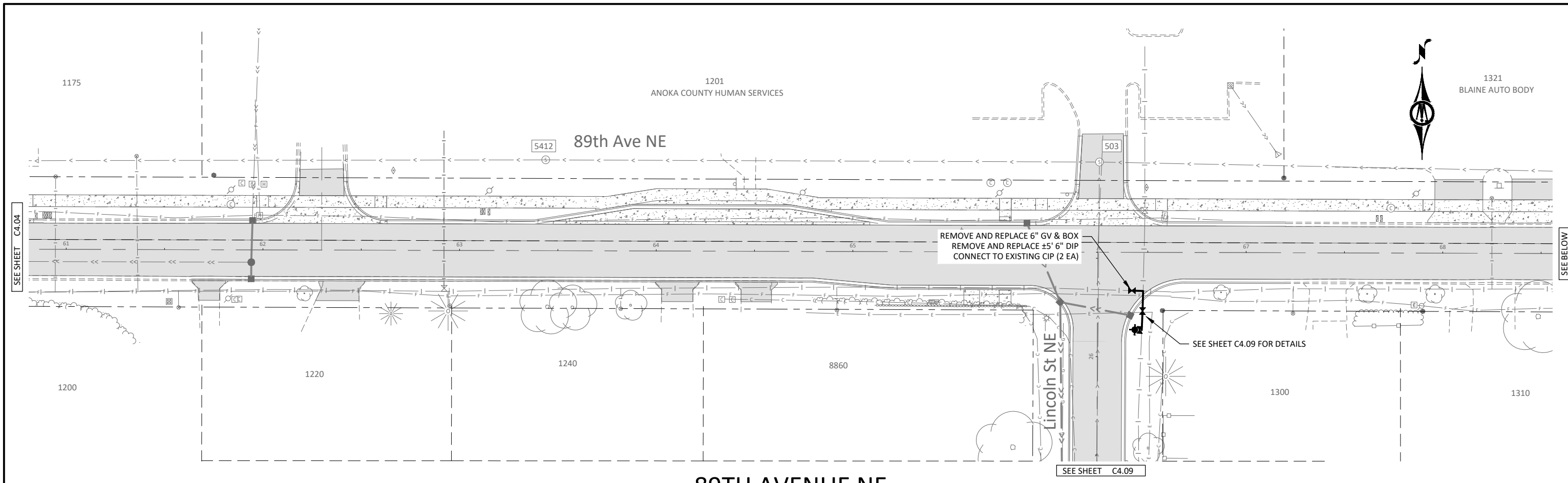
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

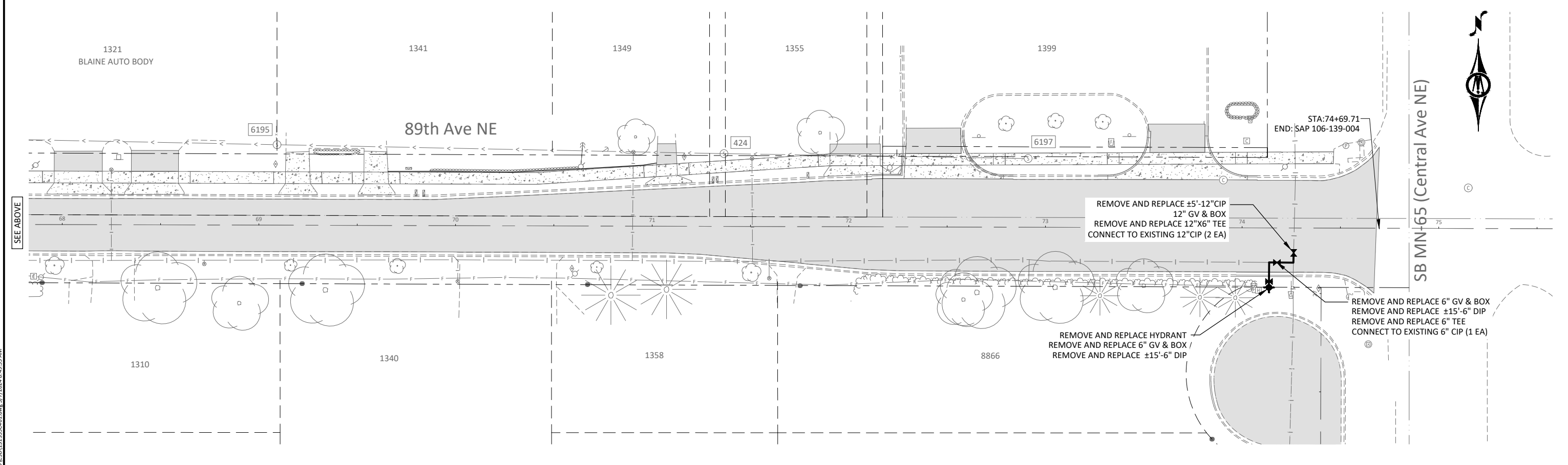
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 SANITARY & WATER IMPROVEMENTS
 89TH AVENUE NE

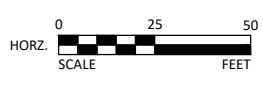
SHEET
C4.04



89TH AVENUE NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:33:53 AM C:\3355\C4.01.dwg 5/7/2024 8:49:55 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



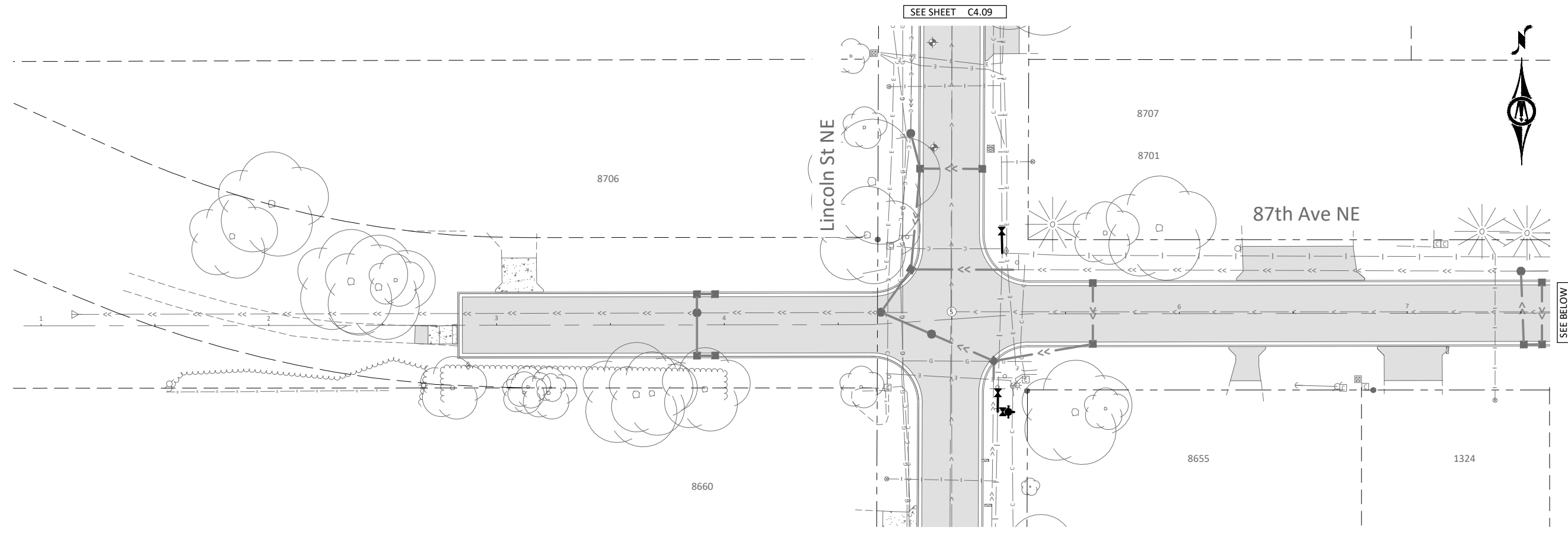
3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

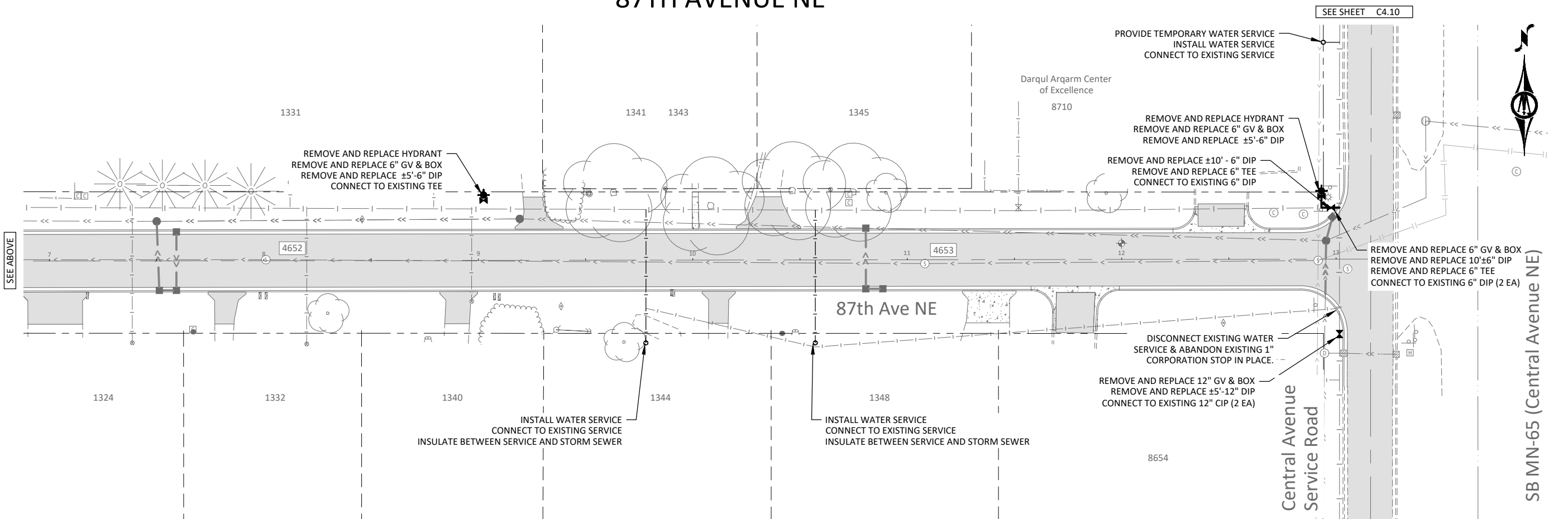
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID CON	04/01/2024 05/06/2024
DJT			
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
SANITARY & WATER IMPROVEMENTS
89TH AVENUE NE

SHEET
C4.05



87TH AVENUE NE



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

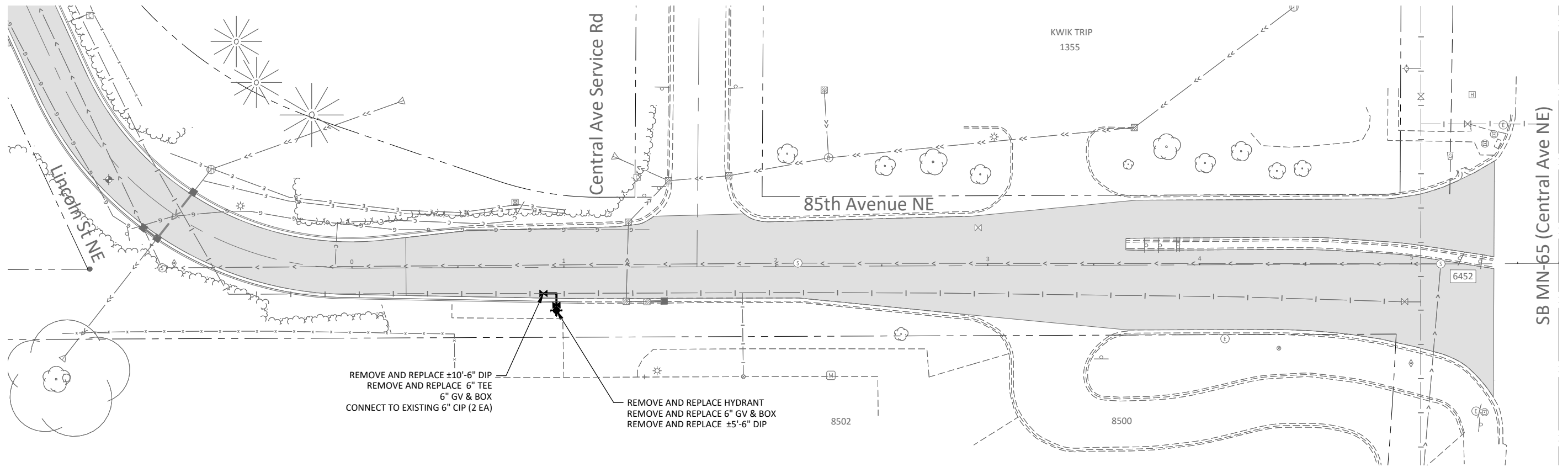
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 SANITARY & WATER IMPROVEMENTS
 87TH AVENUE NE

SHEET
C4.06

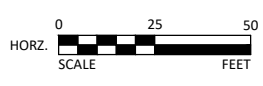
© Bolton & Menk, Inc. 2024. All Rights Reserved.
 PLANNING\1335\CAD\C4.06\1335-C4.06.dwg 5/7/2024 8:50:57 AM

SEE SHEET C4.08



85TH AVENUE NE

© Bolton & Menk, Inc. 2024. All Rights Reserved.
 PLAINFIELD, NJ 07068 (609) 426-1333 FAX (609) 426-1335



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED
 BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED
 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

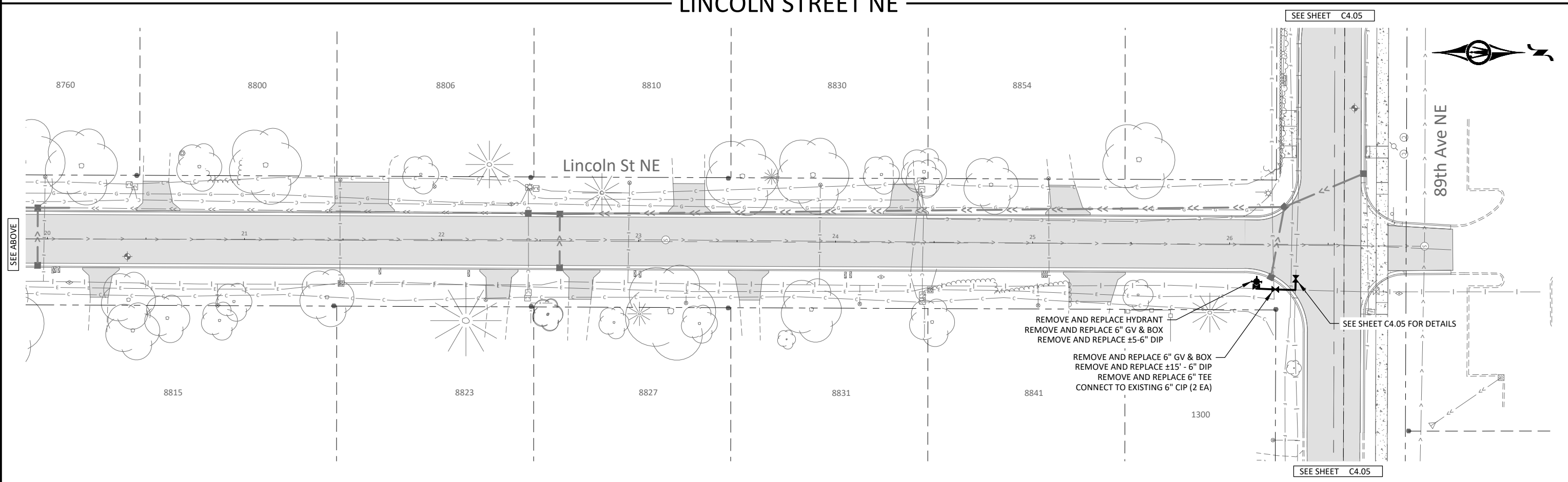
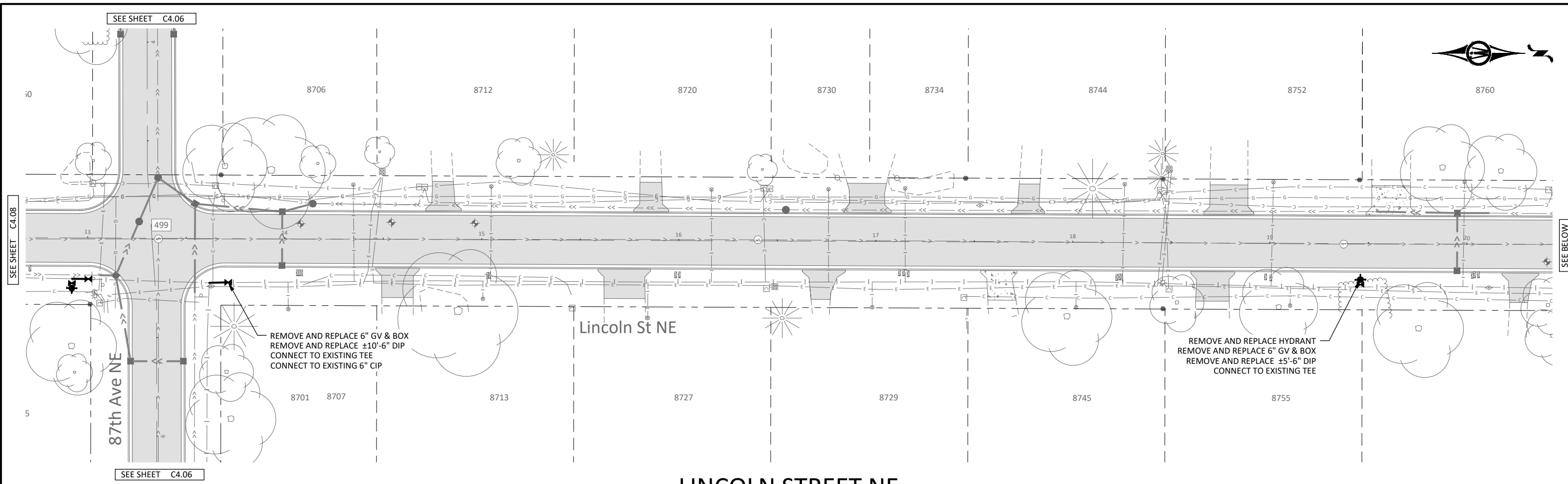


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
		CON	05/06/2024
DRAWN			
DJT			
CHECKED			
TJP			
CLIENT PROJ. NO.			
24-07			

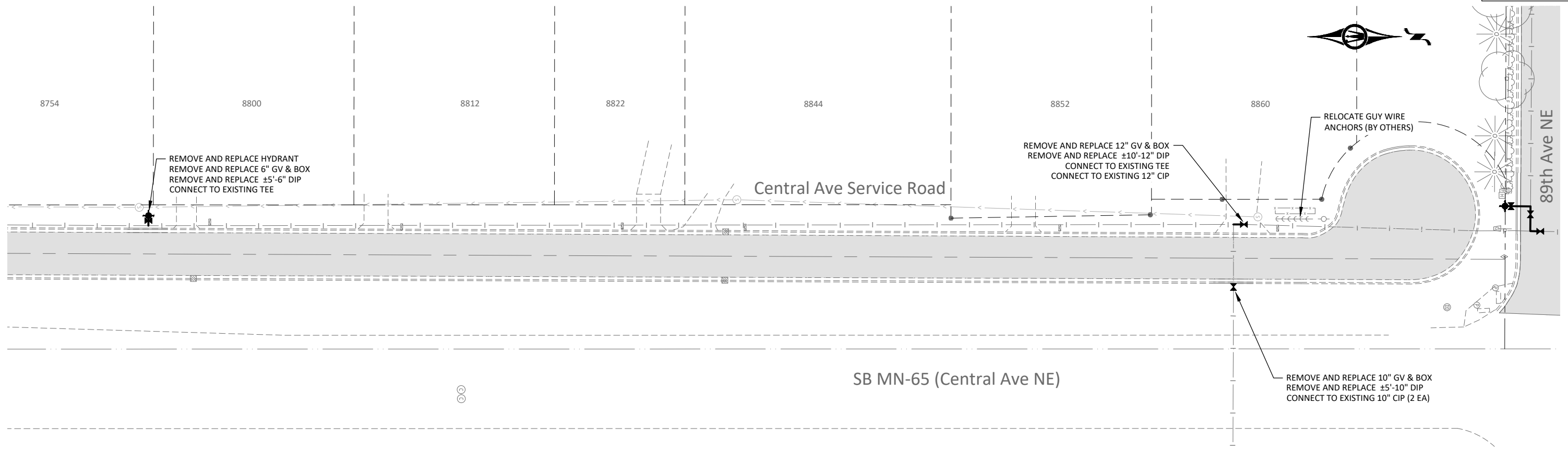
BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 SANITARY & WATER IMPROVEMENTS
 85TH AVENUE NE

SHEET
 C4.07



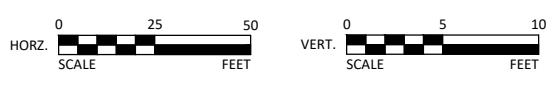
<p>0 25 50 HORIZ. SCALE FEET</p>	<p>HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.</p> <p>MICHAEL S NILL LIC. NO. 26914 DATE 04/01/2024</p>	<p>BOLTON & MENK</p>	<p>3507 HIGH POINT DRIVE NORTH BLDG. 1 SUITE E130 OAKDALE, MINNESOTA 55128 Phone: (651) 704-9970 Email: Oakdale@bolton-menk.com www.bolton-menk.com</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED</td> <td>MSN</td> <td>NO.</td> <td>ISSUED FOR</td> <td>DATE</td> </tr> <tr> <td>DRAWN</td> <td>DJT</td> <td>0</td> <td>BID CON</td> <td>04/01/2024 05/06/2024</td> </tr> <tr> <td>CHECKED</td> <td>TJP</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLIENT PROJ. NO.</td> <td>24-07</td> <td></td> <td></td> <td></td> </tr> </table>	DESIGNED	MSN	NO.	ISSUED FOR	DATE	DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024	CHECKED	TJP				CLIENT PROJ. NO.	24-07				<p>BLAINE, MINNESOTA</p> <p>2024 SOUTHWEST AREA STREET RECONSTRUCTION SANITARY & WATER IMPROVEMENTS LINCOLN STREET NE</p>	<p>SHEET C4.09</p>
DESIGNED	MSN	NO.	ISSUED FOR	DATE																						
DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024																						
CHECKED	TJP																									
CLIENT PROJ. NO.	24-07																									

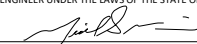
© Bolton & Menk, Inc. 2024. All Rights Reserved.
 PLAN: BL13353403.DWG (3D) 13:55:40.08 5/7/2024 8:53:27 AM



CENTRAL AVENUE SERVICE ROAD

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/23 11:35:53 AM C:\3D\131355410.dwg 5/7/2024 8:54:13 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024

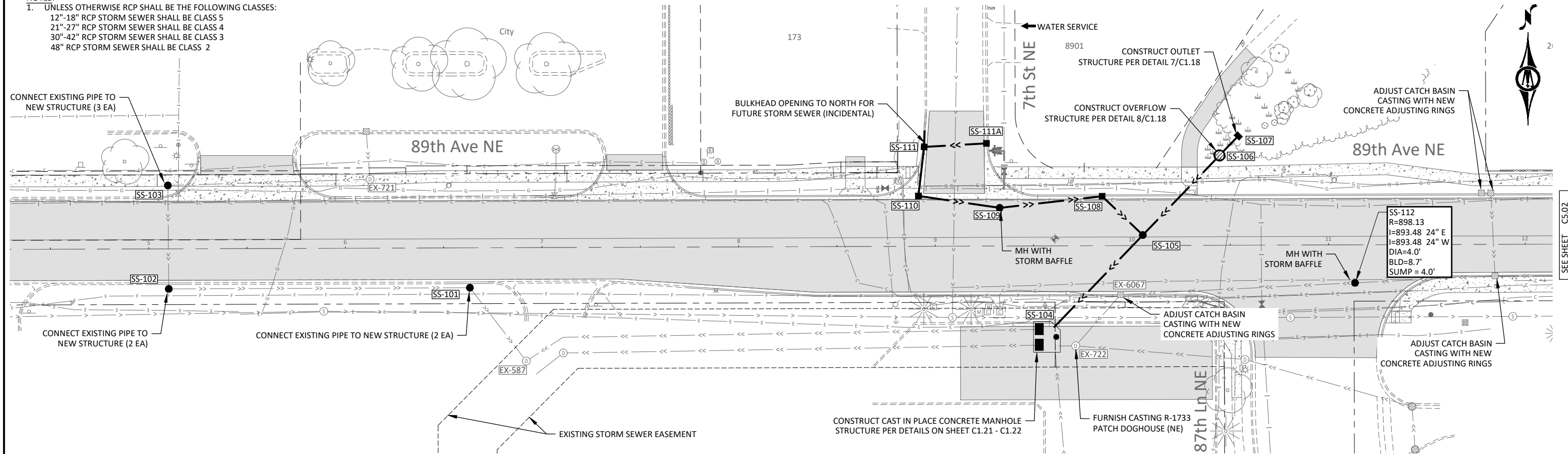


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

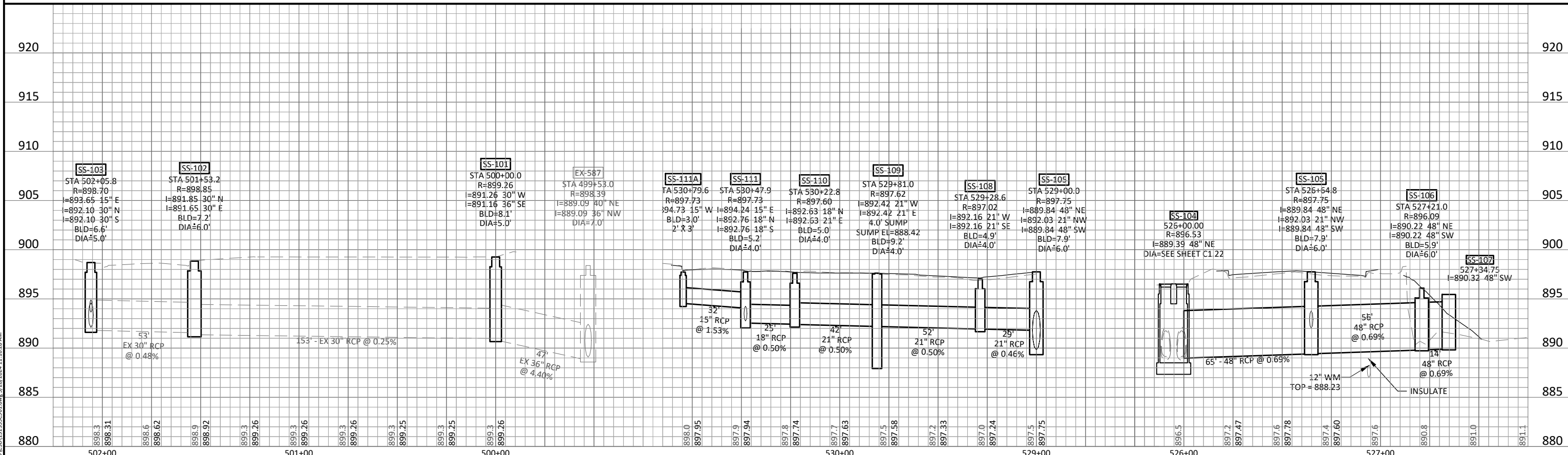
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
		CON	05/06/2024
DRAWN			
DJT			
CHECKED			
TJP			
CLIENT PROJ. NO.			
24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 SANITARY & WATER IMPROVEMENTS
 CENTRAL AVENUE SERVICE ROAD

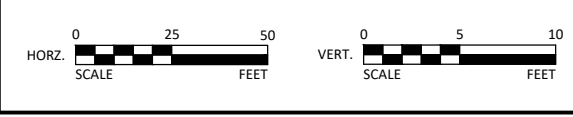
- NOTES:
 1. UNLESS OTHERWISE RCP SHALL BE THE FOLLOWING CLASSES:
 12"-18" RCP STORM SEWER SHALL BE CLASS 5
 21"-27" RCP STORM SEWER SHALL BE CLASS 4
 30"-42" RCP STORM SEWER SHALL BE CLASS 3
 48" RCP STORM SEWER SHALL BE CLASS 2



89TH AVENUE NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:16:28 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



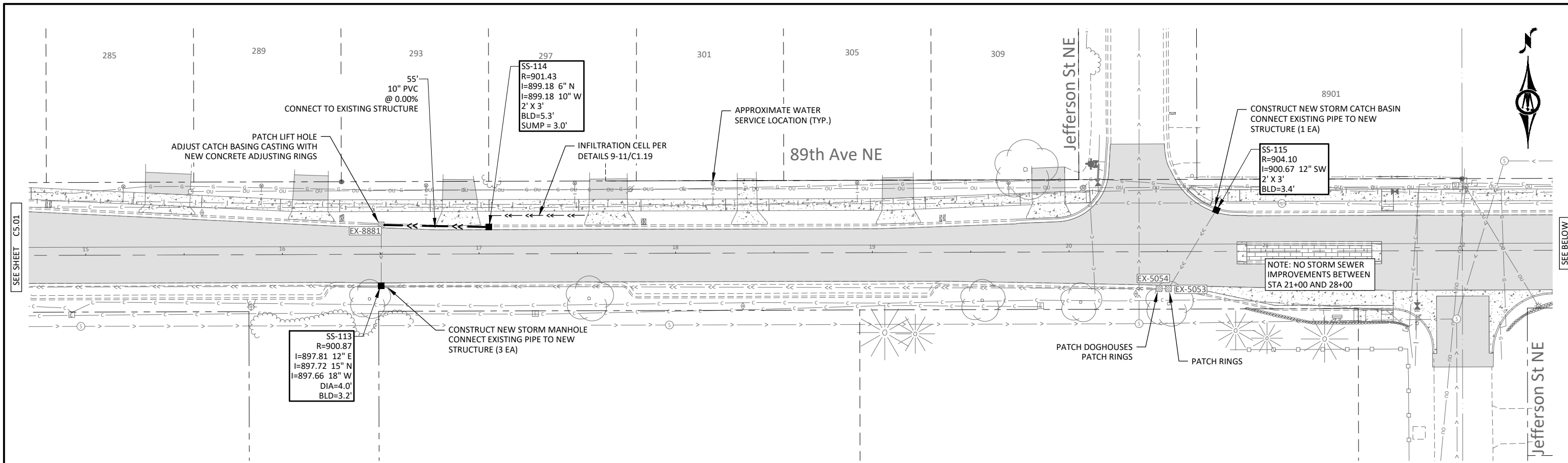
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

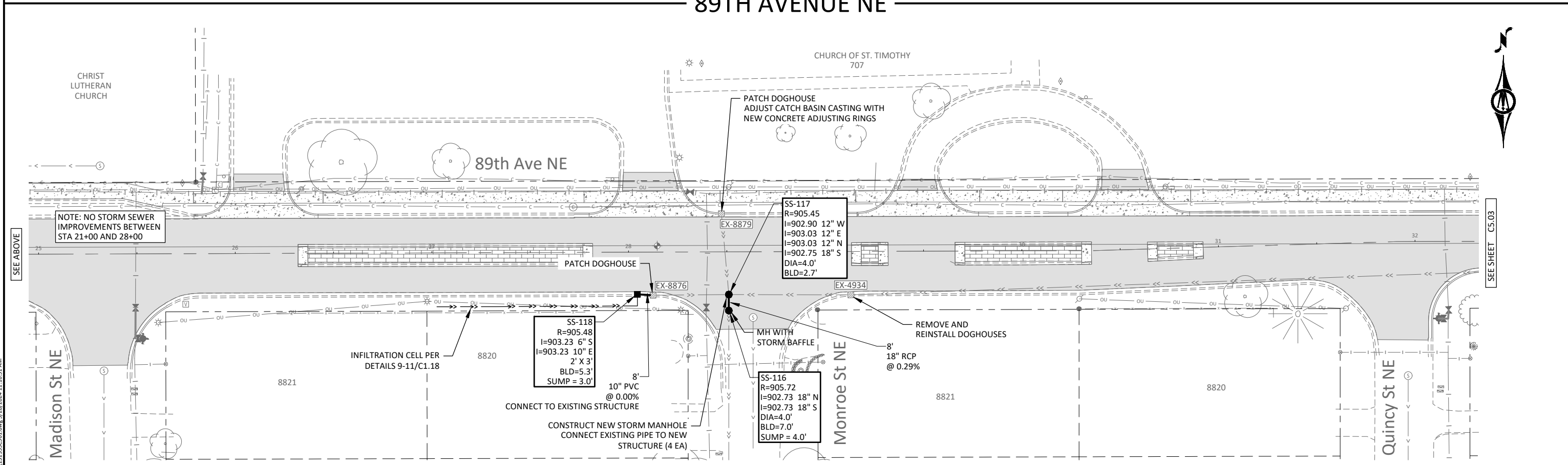
DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024
CHECKED	TJP			05/06/2024
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STORM SEWER IMPROVEMENTS
 89TH AVENUE NE

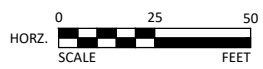
SHEET
 C5.01



89TH AVENUE NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:16:51 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

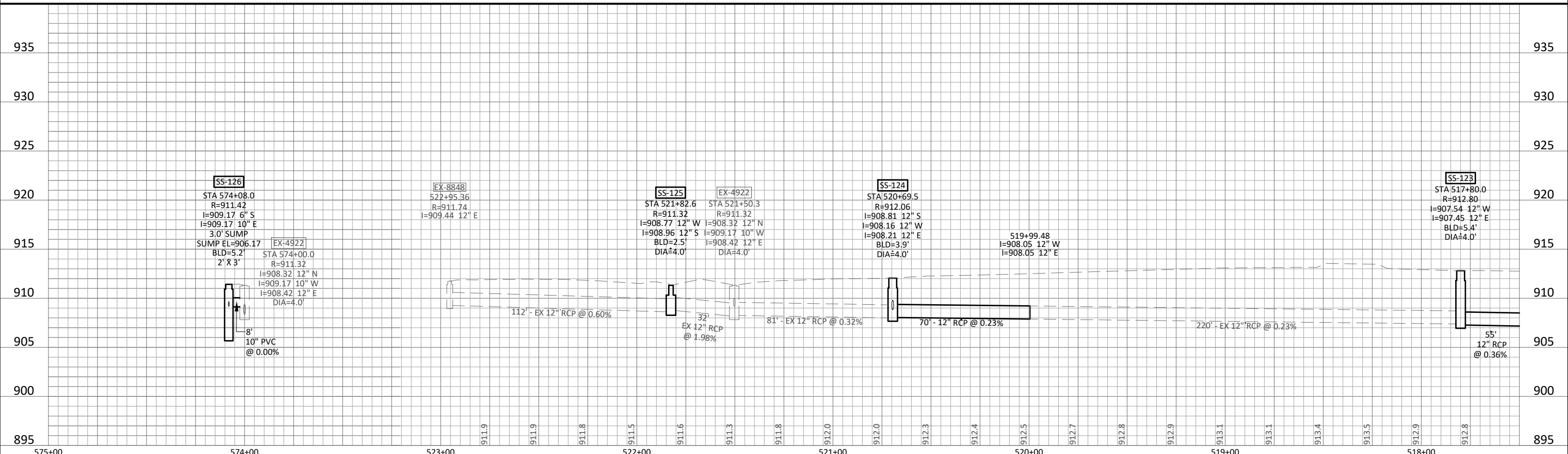
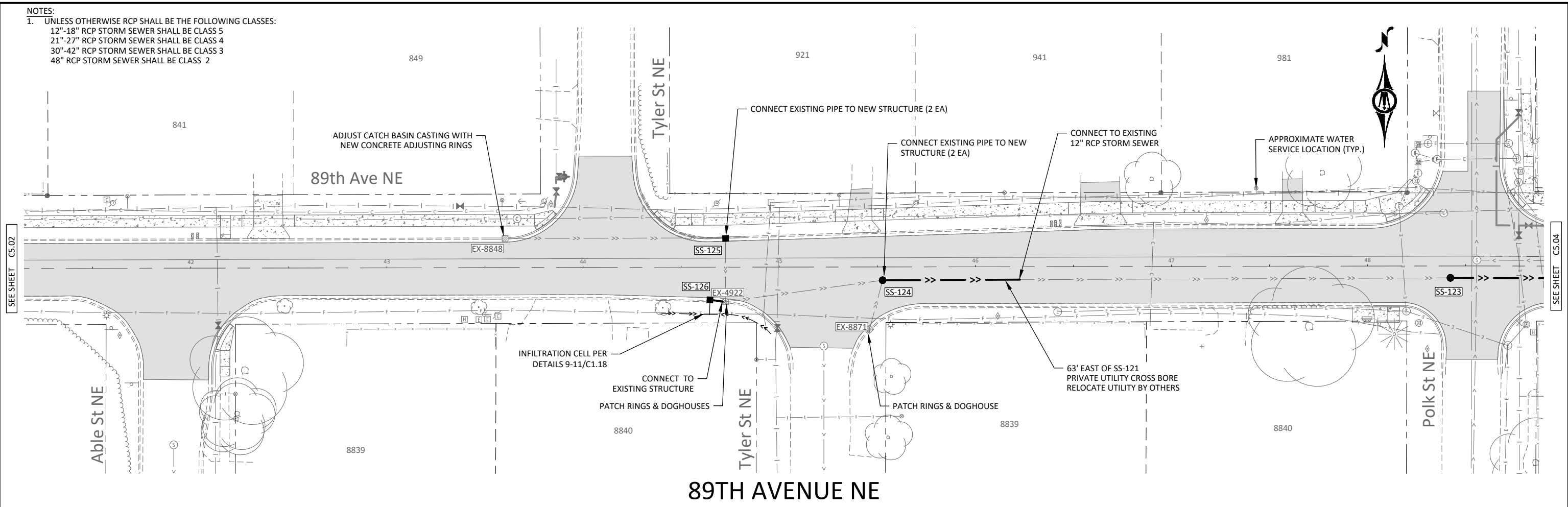
SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

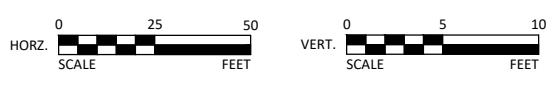
BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STORM SEWER IMPROVEMENTS
 89TH AVENUE NE

SHEET
 C5.02

- NOTES:
 1. UNLESS OTHERWISE RCP SHALL BE THE FOLLOWING CLASSES:
 12"-18" RCP STORM SEWER SHALL BE CLASS 5
 21"-27" RCP STORM SEWER SHALL BE CLASS 4
 30"-42" RCP STORM SEWER SHALL BE CLASS 3
 48" RCP STORM SEWER SHALL BE CLASS 2



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11:17:14 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



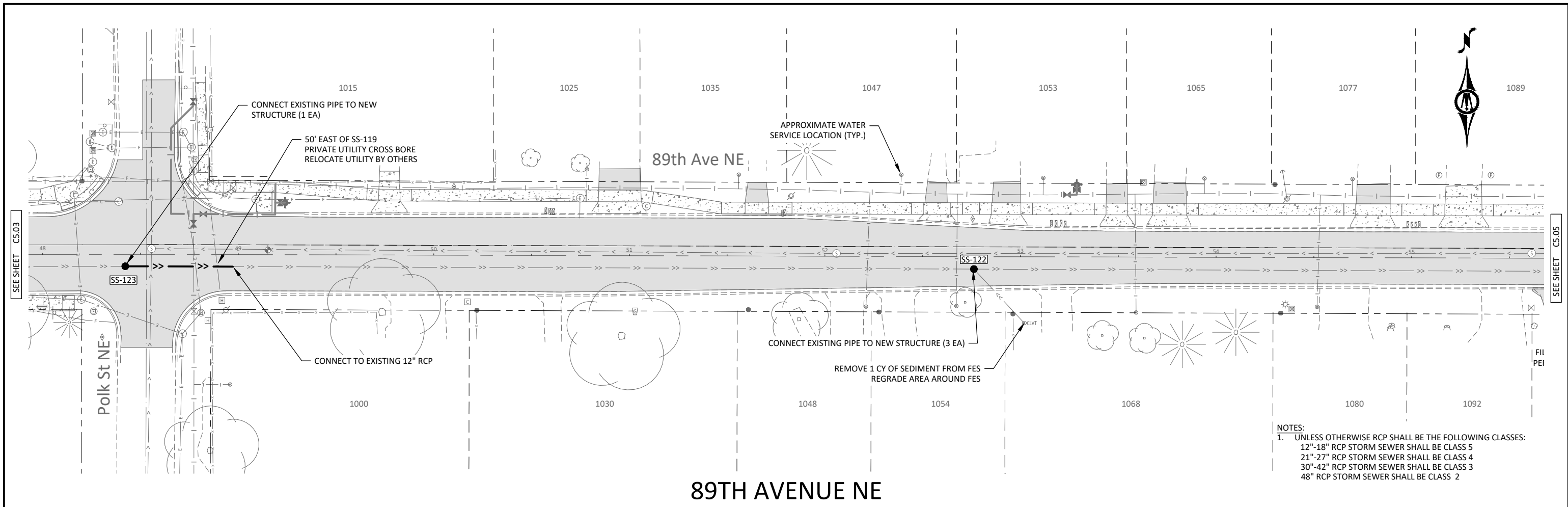
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

DESIGNED	MSN	ISSUED FOR	BID	DATE
DRAWN	DJT	CON	04/01/2024	05/06/2024
CHECKED	TJP			
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STORM SEWER IMPROVEMENTS
 89TH AVENUE NE

SHEET
C5.03



SEE SHEET C5.03

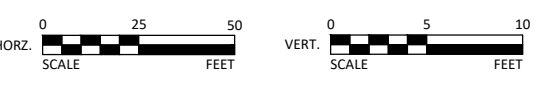
SEE SHEET C5.05

NOTES:
 1. UNLESS OTHERWISE RCP SHALL BE THE FOLLOWING CLASSES:
 12"-18" RCP STORM SEWER SHALL BE CLASS 5
 21"-27" RCP STORM SEWER SHALL BE CLASS 4
 30"-42" RCP STORM SEWER SHALL BE CLASS 3
 48" RCP STORM SEWER SHALL BE CLASS 2

89TH AVENUE NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:17:33 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

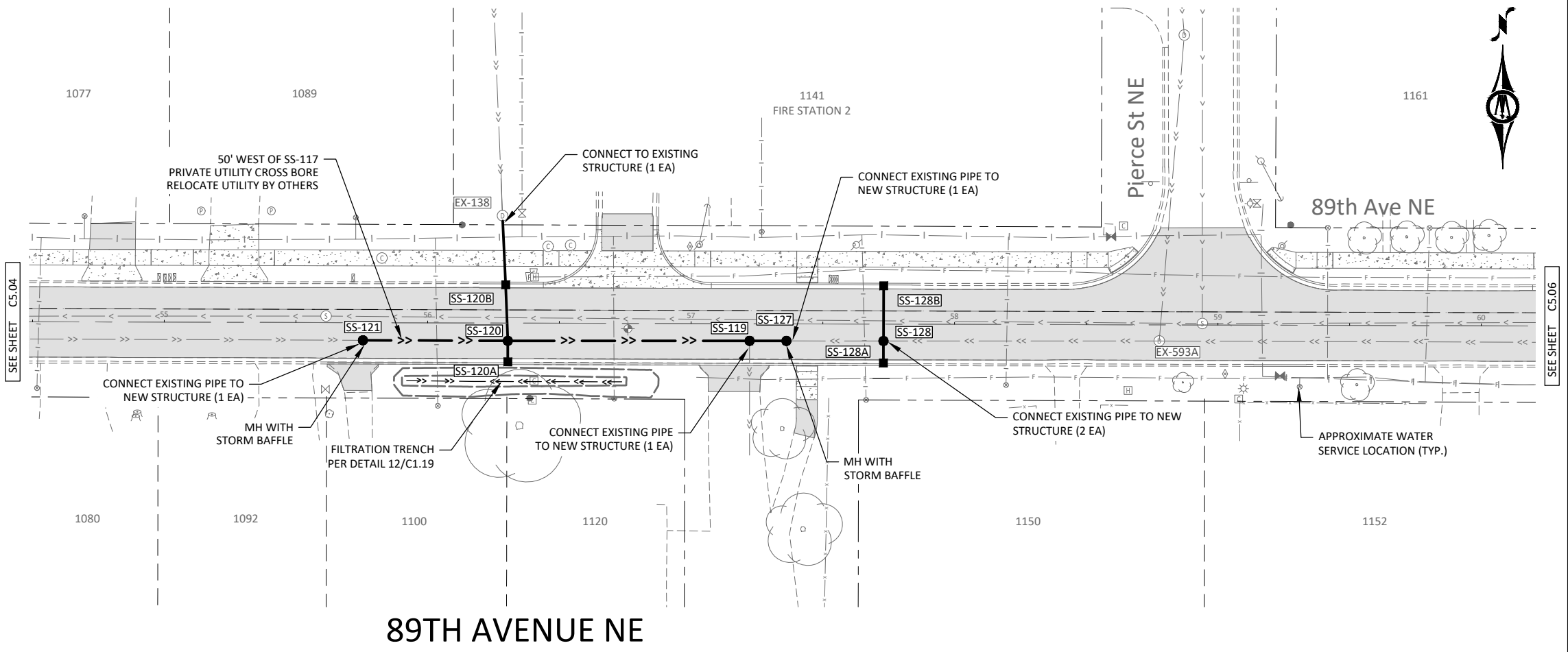
DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024
CHECKED	TJP			
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STORM SEWER IMPROVEMENTS
 89TH AVENUE NE

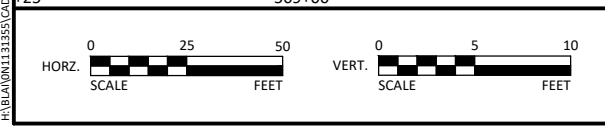
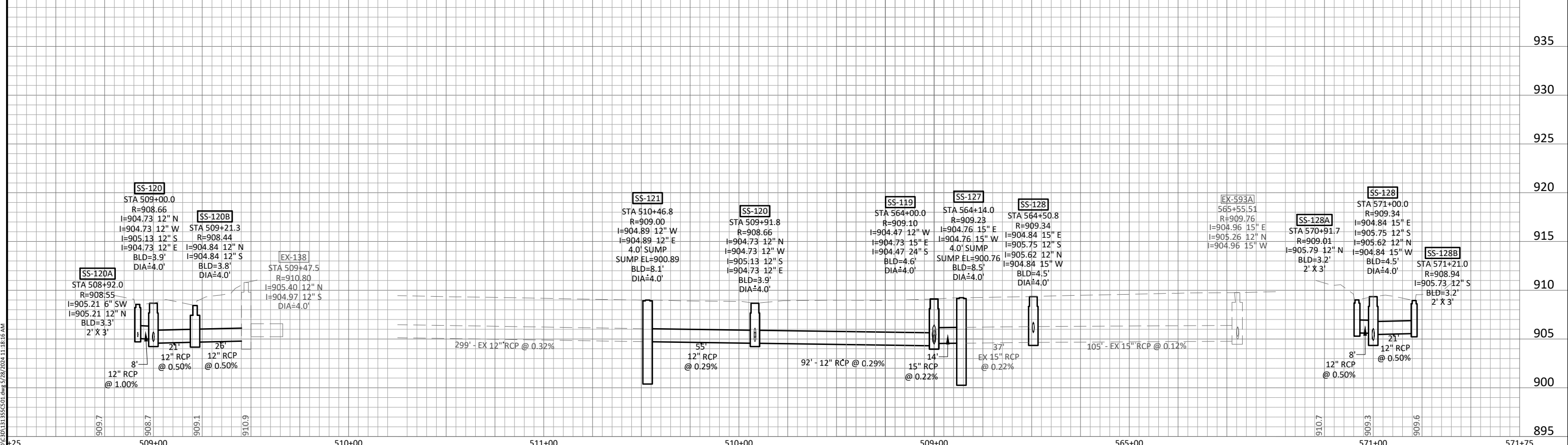
SHEET
C5.04



NOTES:
 1. UNLESS OTHERWISE RCP SHALL BE THE FOLLOWING CLASSES:
 12"-18" RCP STORM SEWER SHALL BE CLASS 5
 21"-27" RCP STORM SEWER SHALL BE CLASS 4
 30"-42" RCP STORM SEWER SHALL BE CLASS 3
 48" RCP STORM SEWER SHALL BE CLASS 2



89TH AVENUE NE



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

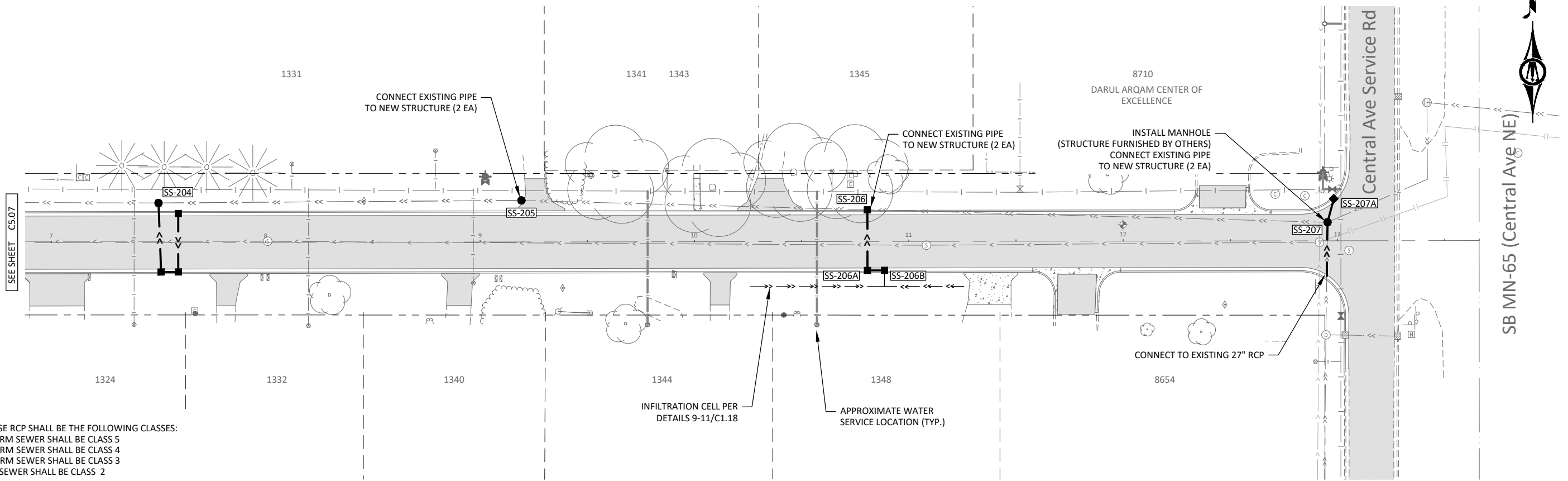
SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STORM SEWER IMPROVEMENTS
 89TH AVENUE NE

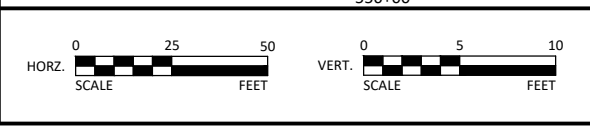
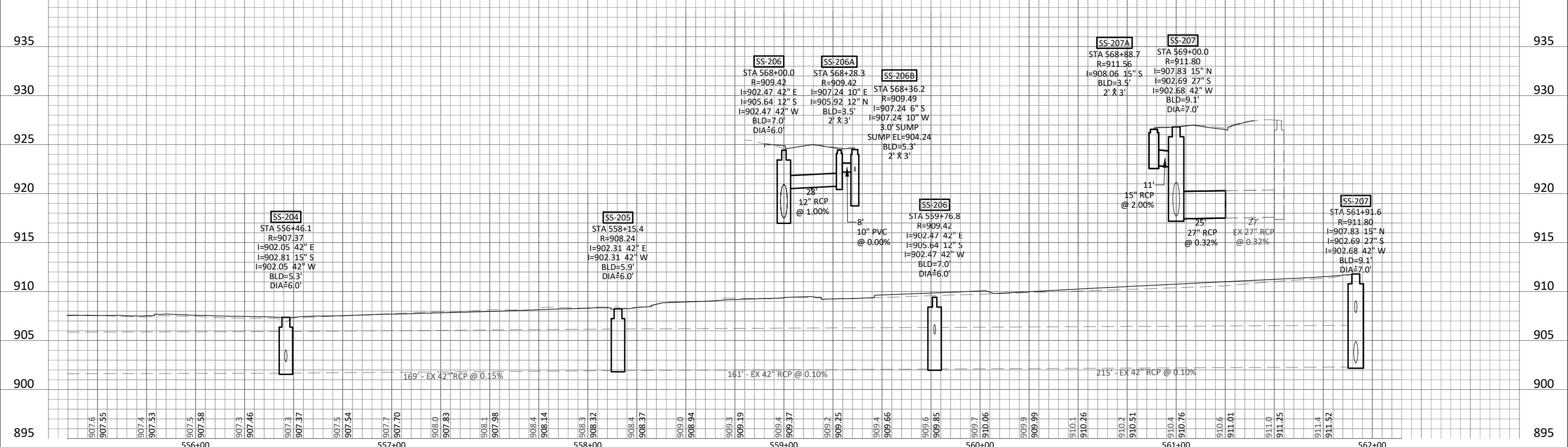
SHEET
 C5.05

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11:18:16 AM



NOTES:
 1. UNLESS OTHERWISE RCP SHALL BE THE FOLLOWING CLASSES:
 12"-18" RCP STORM SEWER SHALL BE CLASS 5
 21"-27" RCP STORM SEWER SHALL BE CLASS 4
 30"-42" RCP STORM SEWER SHALL BE CLASS 3
 48" RCP STORM SEWER SHALL BE CLASS 2

87TH AVENUE NE



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



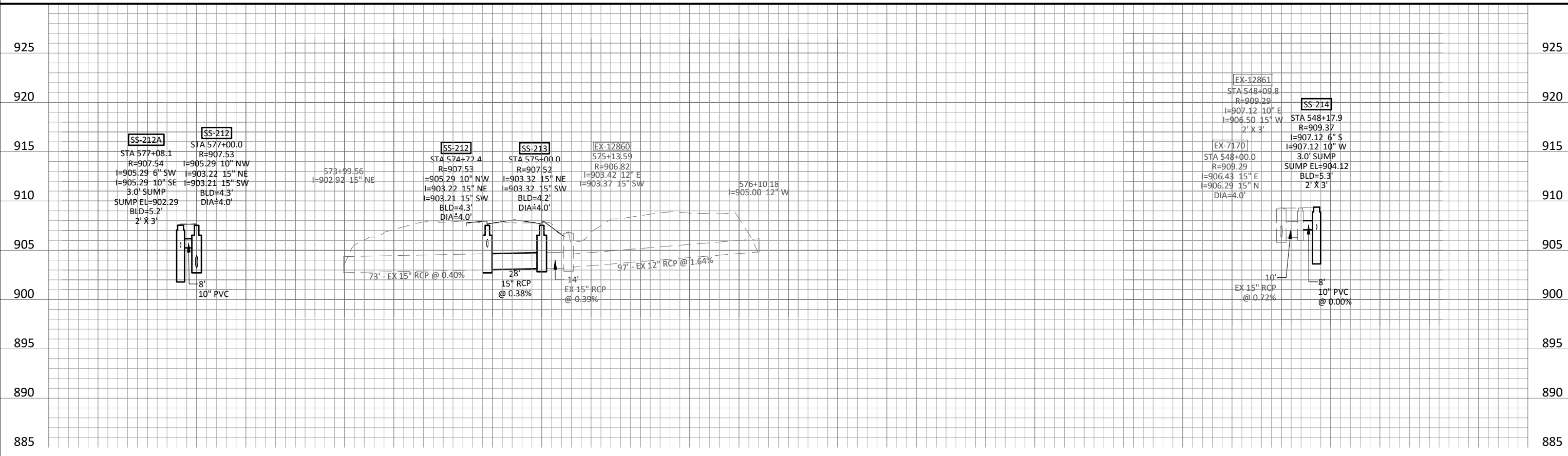
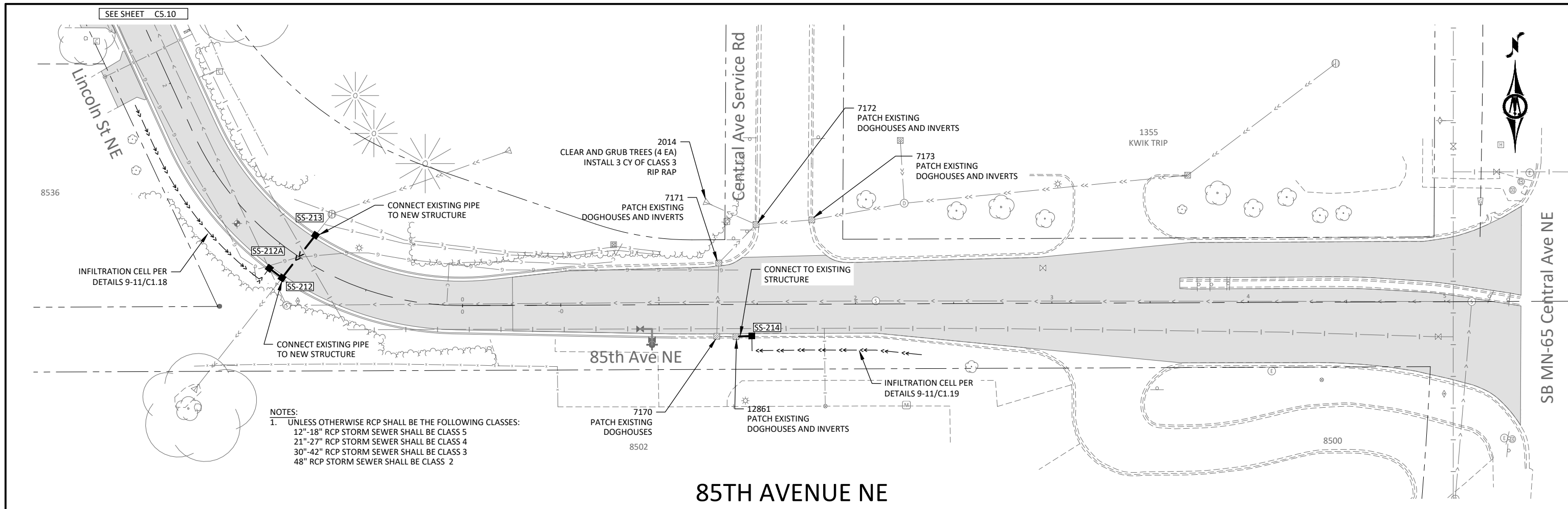
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

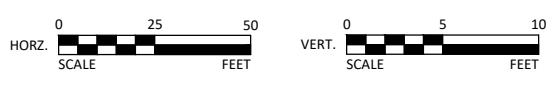
BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STORM SEWER IMPROVEMENTS
 87TH AVENUE NE

SHEET
 C5.08

© Bolton & Menk, Inc. 2024. All Rights Reserved. TAB:PLAN11335350.DWG (3/13/2024 11:21:01 AM)



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/22/24 11:22:15 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024

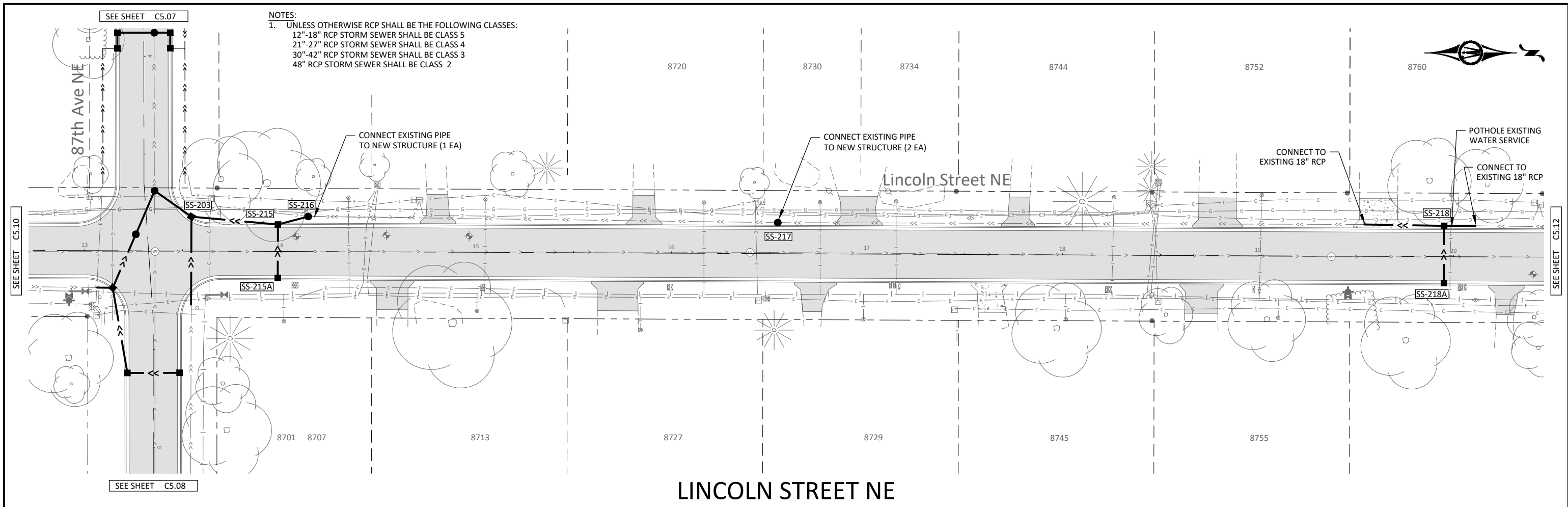


3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

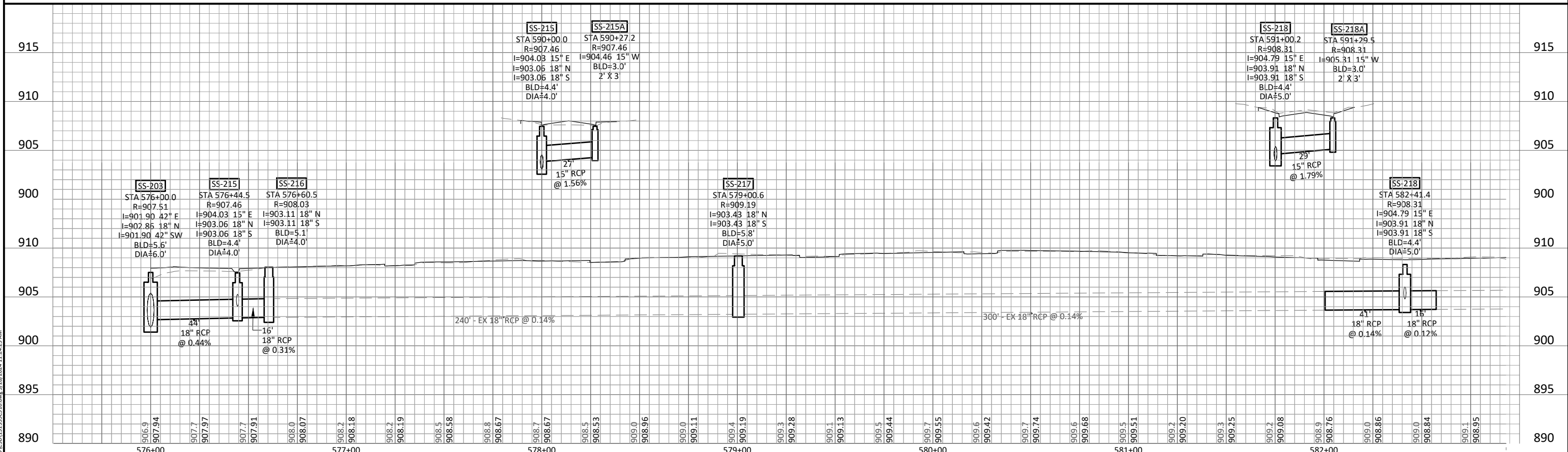
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
STORM SEWER IMPROVEMENTS
85TH AVENUE NE

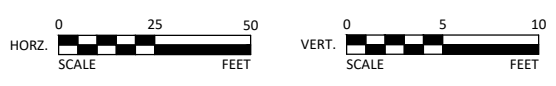
SHEET
C5.09



LINCOLN STREET NE



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/24/2024 11:24:25 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024
CHECKED	TJP			05/06/2024
CLIENT PROJ. NO.	24-07			

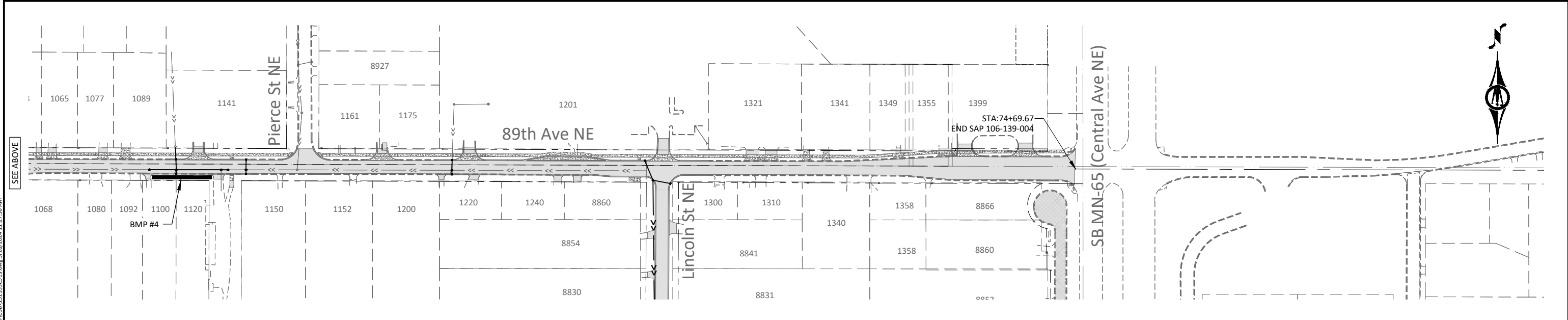
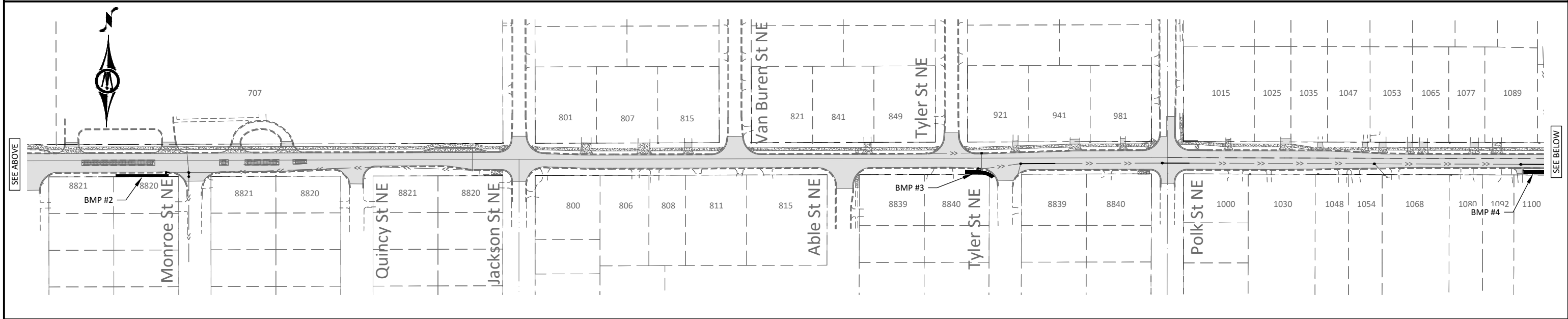
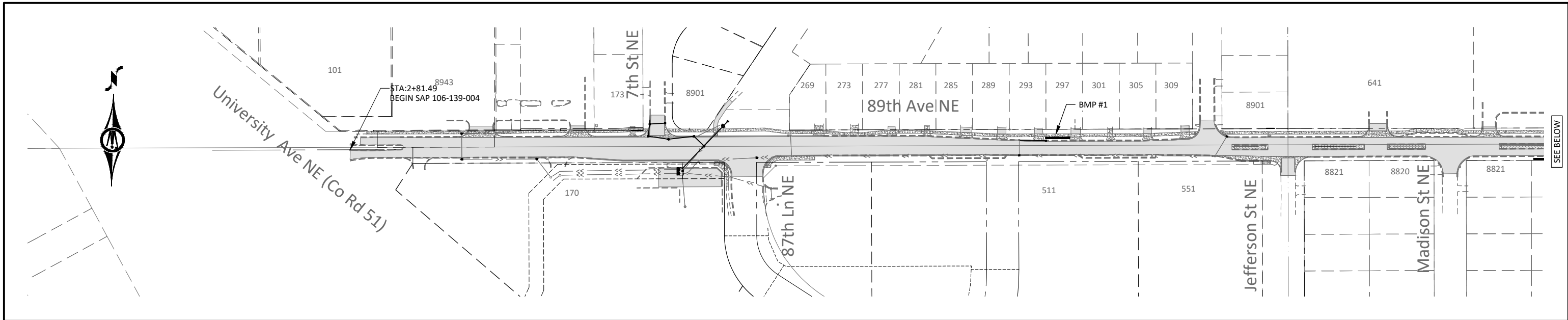
BLAINE, MINNESOTA

2024 SOUTHWEST AREA STREET RECONSTRUCTION

STORM SEWER IMPROVEMENTS

LINCOLN STREET NE

SHEET
C5.11



© Bolton & Menk, Inc. 2024. All Rights Reserved. P:\BOLTON\133535\CD\133535\13.dwg 5/28/2024 11:27:30 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



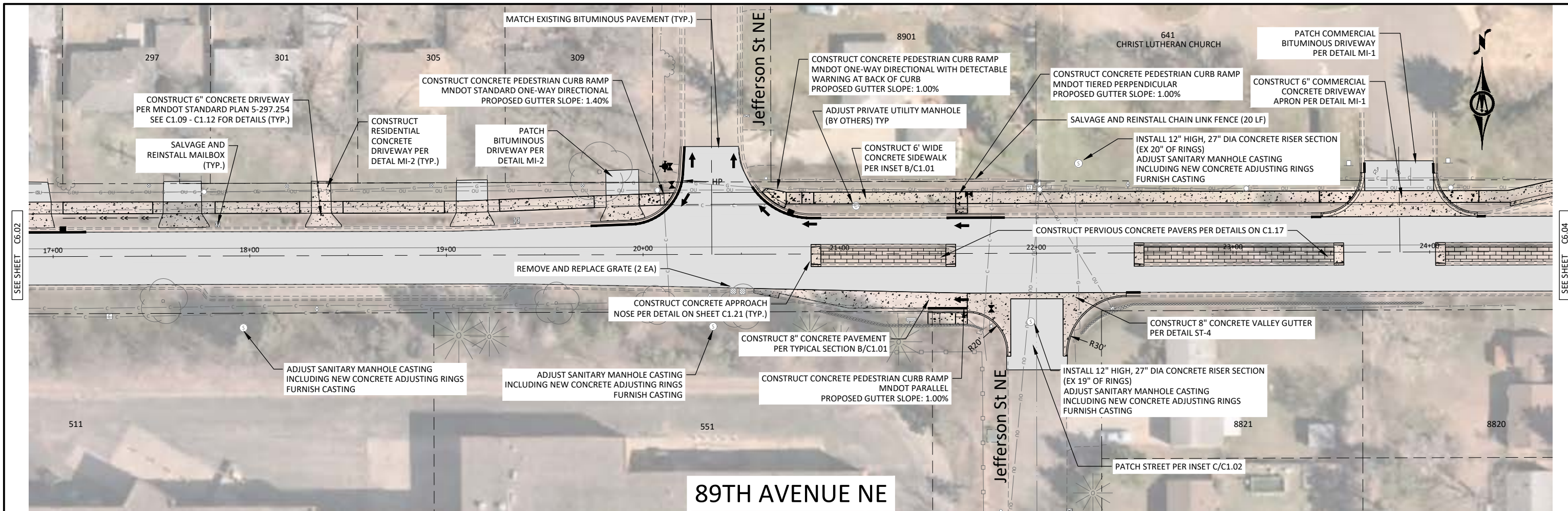
3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

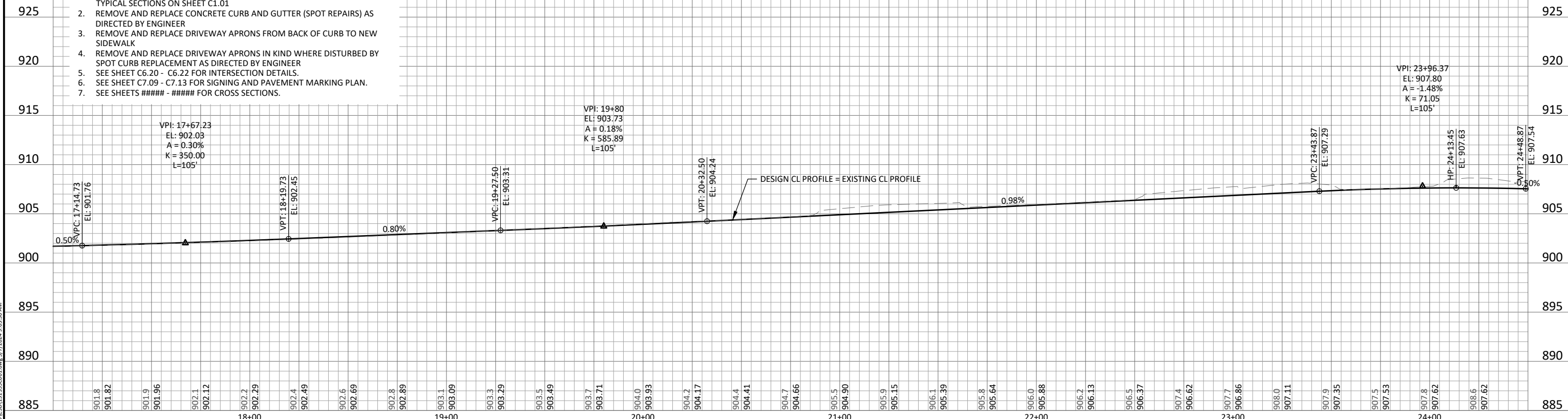
BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
BMP LOCATION PLAN

SHEET
C5.13

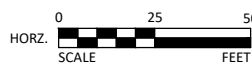


NOTES

1. REMOVE EXISTING BITUMINOUS PAVEMENT AND AGGREGATE BASE PER TYPICAL SECTIONS ON SHEET C1.01
2. REMOVE AND REPLACE CONCRETE CURB AND GUTTER (SPOT REPAIRS) AS DIRECTED BY ENGINEER
3. REMOVE AND REPLACE DRIVEWAY APRONS FROM BACK OF CURB TO NEW SIDEWALK
4. REMOVE AND REPLACE DRIVEWAY APRONS IN KIND WHERE DISTURBED BY SPOT CURB REPLACEMENT AS DIRECTED BY ENGINEER
5. SEE SHEET C6.20 - C6.22 FOR INTERSECTION DETAILS.
6. SEE SHEET C7.09 - C7.13 FOR SIGNING AND PAVEMENT MARKING PLAN.
7. SEE SHEETS ##### - ##### FOR CROSS SECTIONS.



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 10:33:53 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



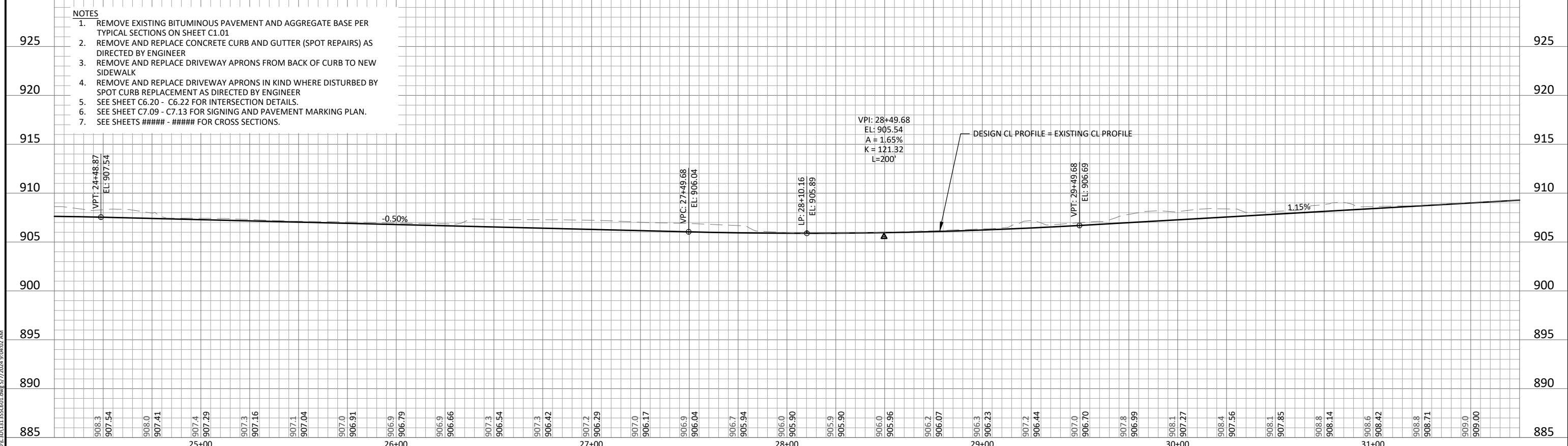
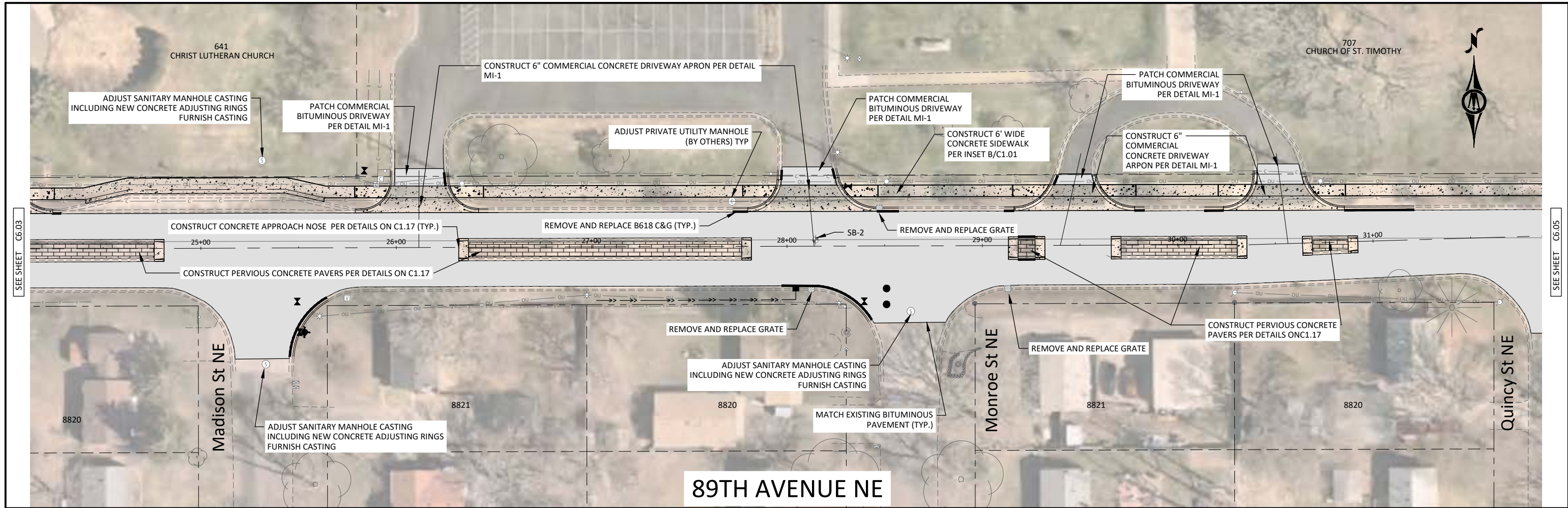
3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024
CHECKED	TJP			05/06/2024
CLIENT PROJ. NO.	24-07			

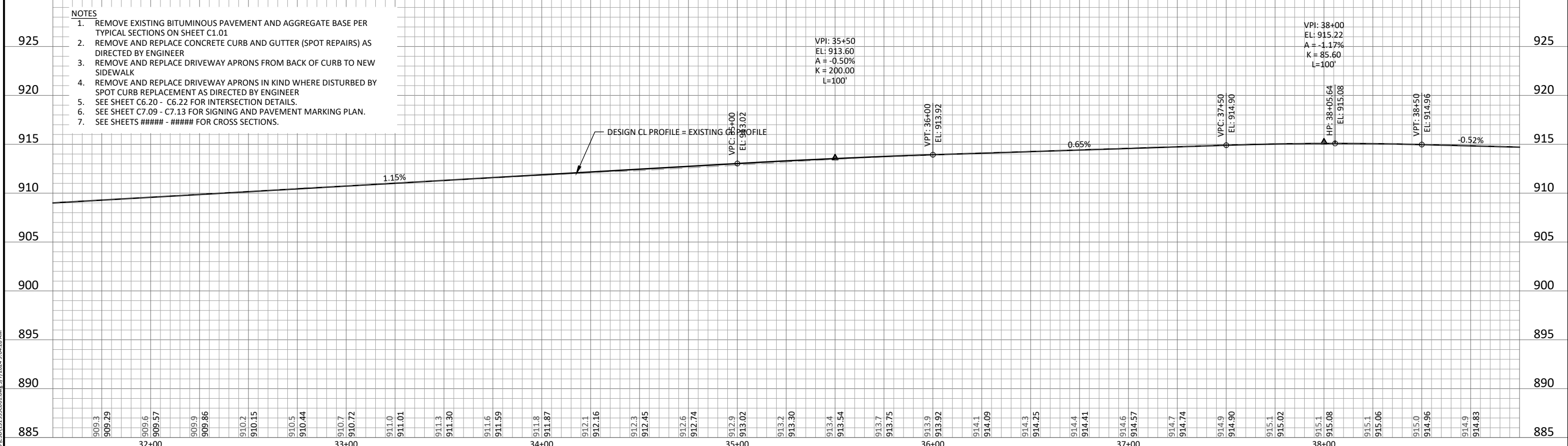
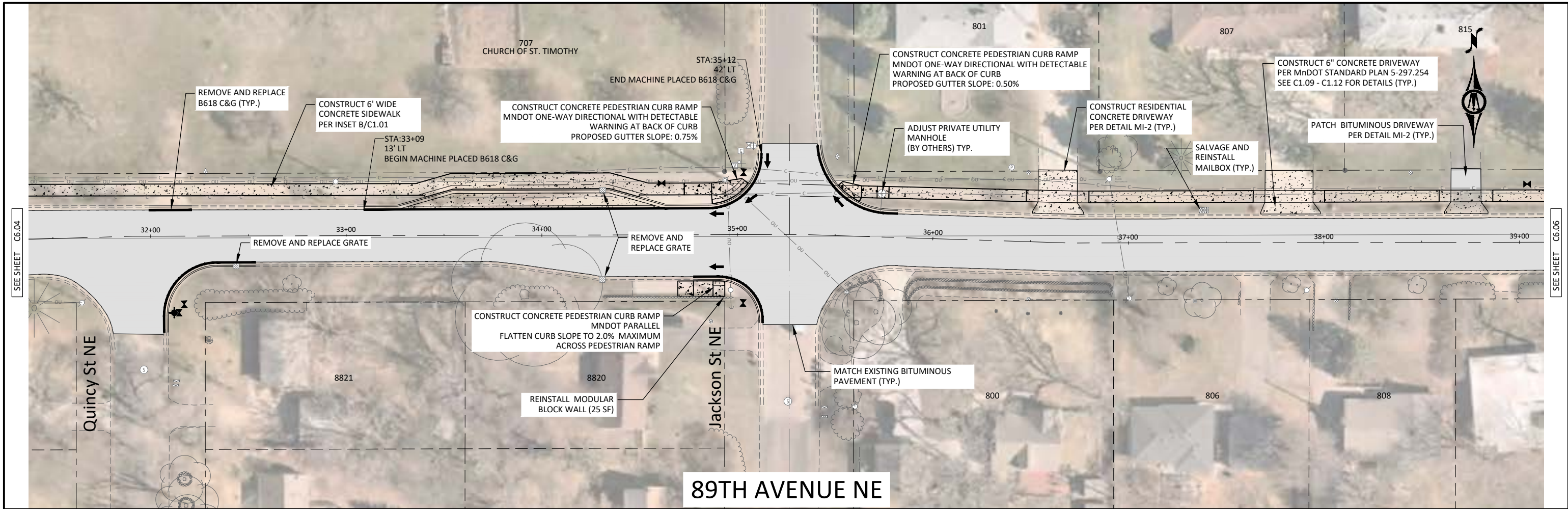
BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
STREET IMPROVEMENTS
89TH AVENUE NE

SHEET
C6.03



<p>0 25 50 SCALE FEET</p> <p>0 5 10 SCALE FEET</p>	<p>I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.</p> <p>MICHAEL S NILL LIC. NO. 26914 DATE 04/01/2024</p>	<p>BOLTON & MENK</p>	<p>3507 HIGH POINT DRIVE NORTH BLDG. 1 SUITE E130 OAKDALE, MINNESOTA 55128 Phone: (651) 704-9970 Email: Oakdale@bolton-menk.com www.bolton-menk.com</p>	<p>DESIGNED MSN DRAWN DJT CHECKED TJP CLIENT PROJ. NO. 24-07</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>ISSUED FOR</th> <th>DATE</th> </tr> <tr> <td>0</td> <td>BID</td> <td>04/01/2024</td> </tr> <tr> <td>0</td> <td>CON</td> <td>05/06/2024</td> </tr> </table>	NO.	ISSUED FOR	DATE	0	BID	04/01/2024	0	CON	05/06/2024	<p>BLAINE, MINNESOTA</p> <p>2024 SOUTHWEST AREA STREET RECONSTRUCTION</p> <p>STREET IMPROVEMENTS</p> <p>89TH AVENUE NE</p>	<p>SHEET</p> <p>C6.04</p>
NO.	ISSUED FOR	DATE														
0	BID	04/01/2024														
0	CON	05/06/2024														

© Bolton & Menk, Inc. 2024. All Rights Reserved. A:\BOLTON\133535\CD\3D\133535\CD.dwg 5/7/2024 9:04:03 AM



0 25 50
SCALE FEET

0 5 10
SCALE FEET

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024

BOLTON & MENK

3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024
CHECKED	TJP			05/06/2024
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA

2024 SOUTHWEST AREA STREET RECONSTRUCTION

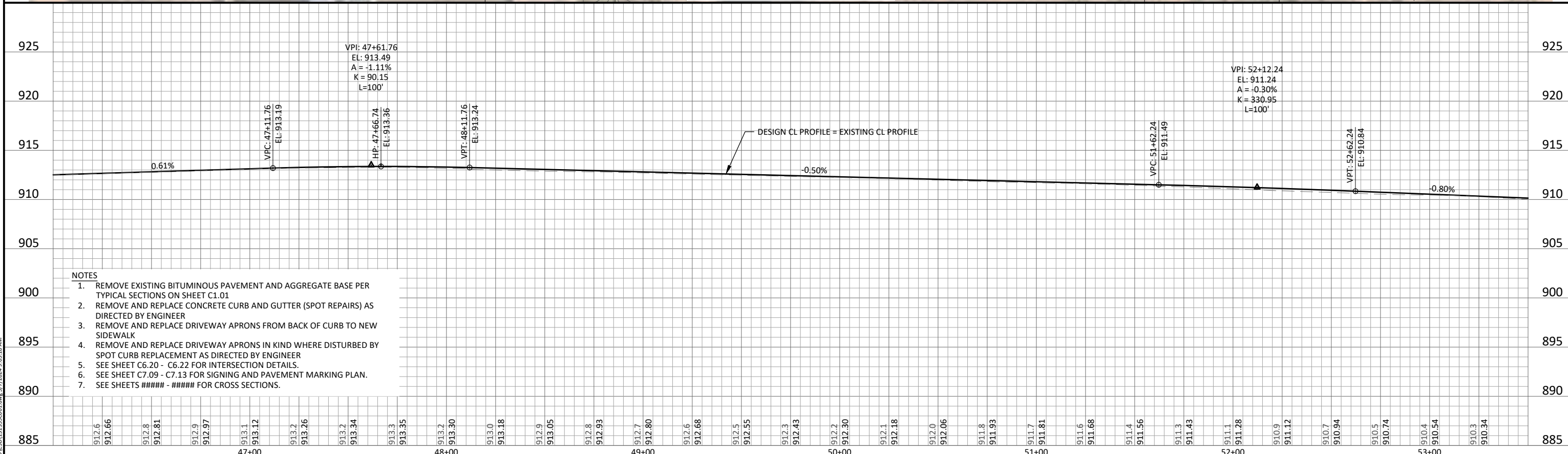
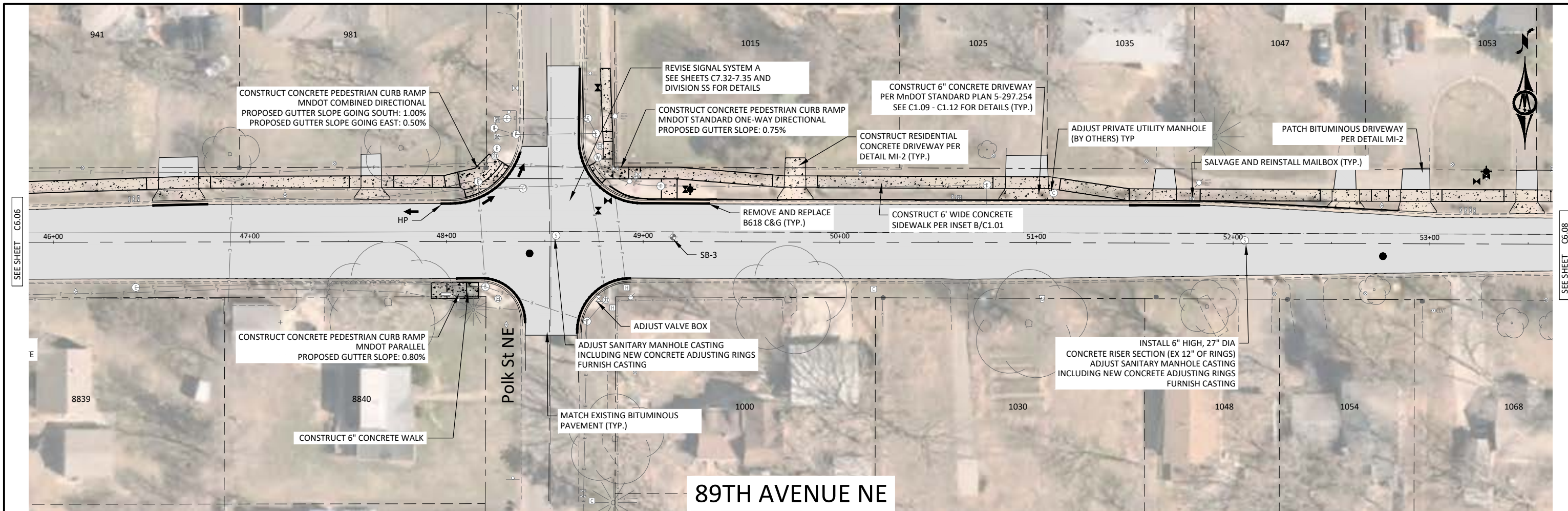
STREET IMPROVEMENTS

89TH AVENUE NE

SHEET

C6.05

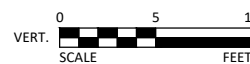
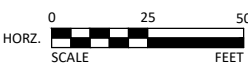
© Bolton & Menk, Inc. 2024. All Rights Reserved. P:\BOLTON\133535\CD\133535-000.dwg 5/7/2024 9:02:28 AM



NOTES

1. REMOVE EXISTING BITUMINOUS PAVEMENT AND AGGREGATE BASE PER TYPICAL SECTIONS ON SHEET C1.01
2. REMOVE AND REPLACE CONCRETE CURB AND GUTTER (SPOT REPAIRS) AS DIRECTED BY ENGINEER
3. REMOVE AND REPLACE DRIVEWAY APRONS FROM BACK OF CURB TO NEW SIDEWALK
4. REMOVE AND REPLACE DRIVEWAY APRONS IN KIND WHERE DISTURBED BY SPOT CURB REPLACEMENT AS DIRECTED BY ENGINEER
5. SEE SHEET C6.20 - C6.22 FOR INTERSECTION DETAILS.
6. SEE SHEET C7.09 - C7.13 FOR SIGNING AND PAVEMENT MARKING PLAN.
7. SEE SHEETS ##### - ##### FOR CROSS SECTIONS.

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/23 11:33:53 AM C:\31355\CD\DWG\172024-06-08.DWG



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



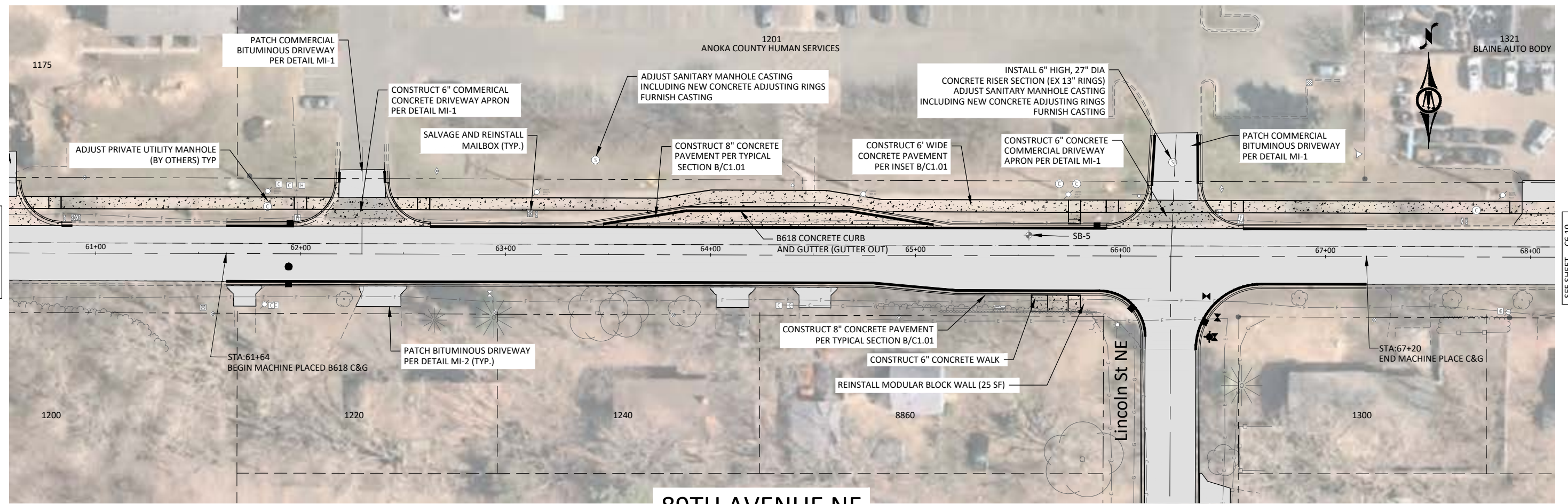
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

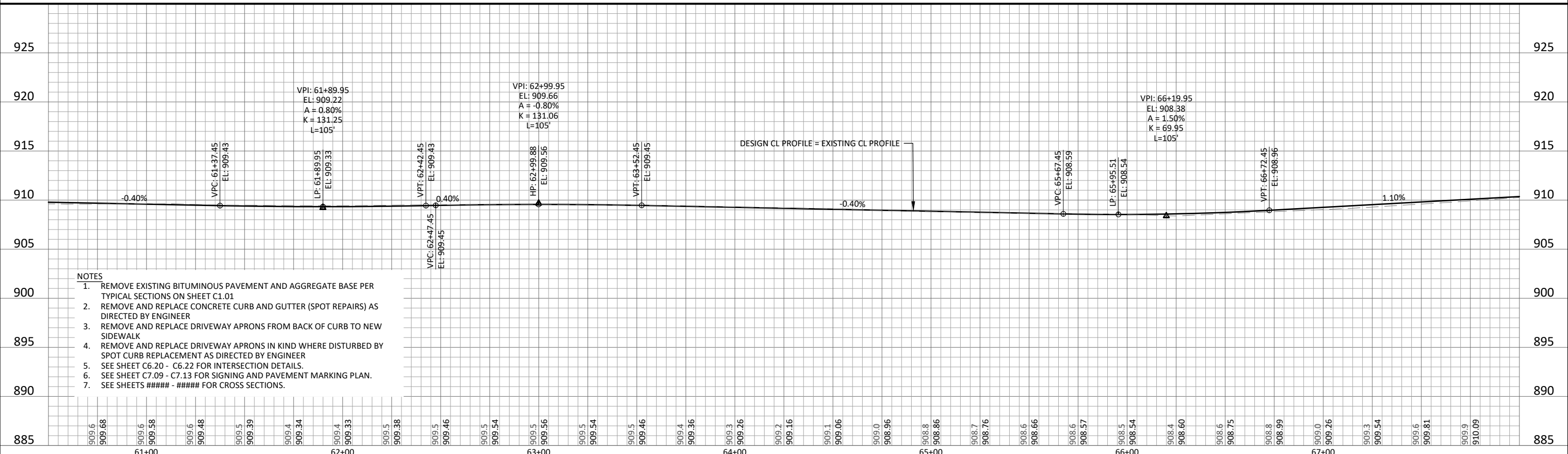
DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024
CHECKED	TJP			05/06/2024
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STREET IMPROVEMENTS
 89TH AVENUE NE

SHEET
C6.07

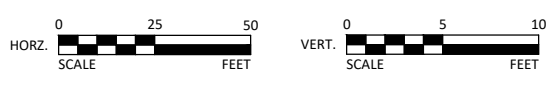


89TH AVENUE NE



- NOTES**
1. REMOVE EXISTING BITUMINOUS PAVEMENT AND AGGREGATE BASE PER TYPICAL SECTIONS ON SHEET C1.01
 2. REMOVE AND REPLACE CONCRETE CURB AND GUTTER (SPOT REPAIRS) AS DIRECTED BY ENGINEER
 3. REMOVE AND REPLACE DRIVEWAY APRONS FROM BACK OF CURB TO NEW SIDEWALK
 4. REMOVE AND REPLACE DRIVEWAY APRONS IN KIND WHERE DISTURBED BY SPOT CURB REPLACEMENT AS DIRECTED BY ENGINEER
 5. SEE SHEET C6.20 - C6.22 FOR INTERSECTION DETAILS.
 6. SEE SHEET C7.09 - C7.13 FOR SIGNING AND PAVEMENT MARKING PLAN.
 7. SEE SHEETS ##### - ##### FOR CROSS SECTIONS.

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 10:53:53 AM C:\335353\001\7/2024\9.06.09 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



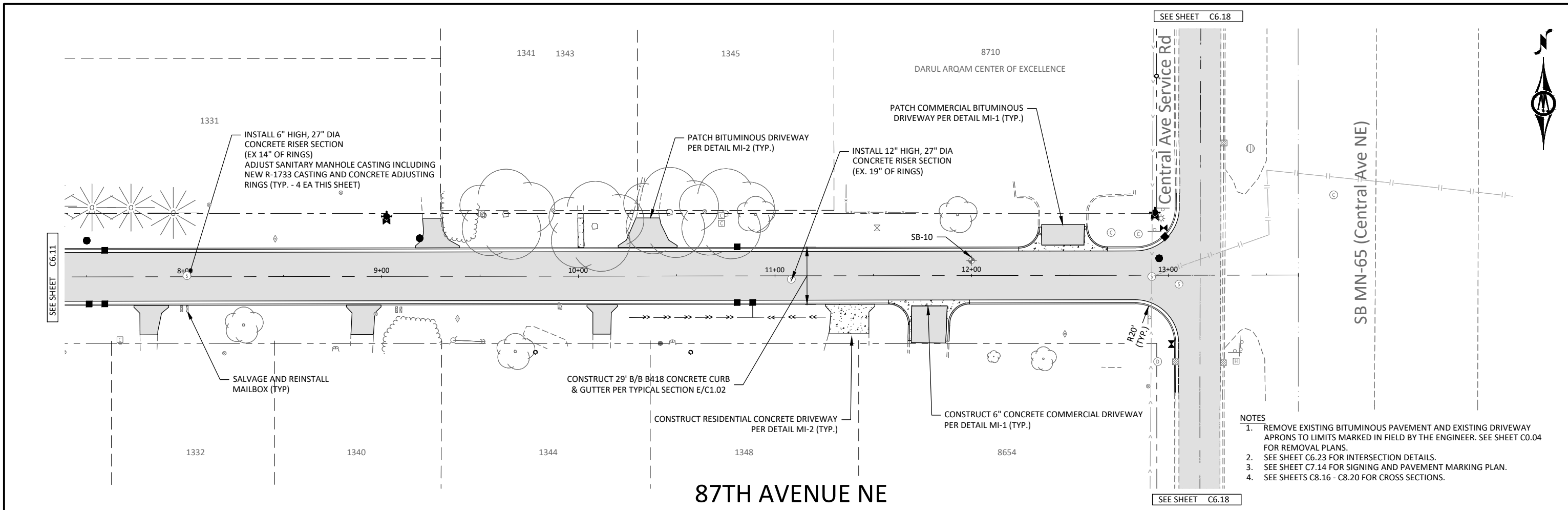
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

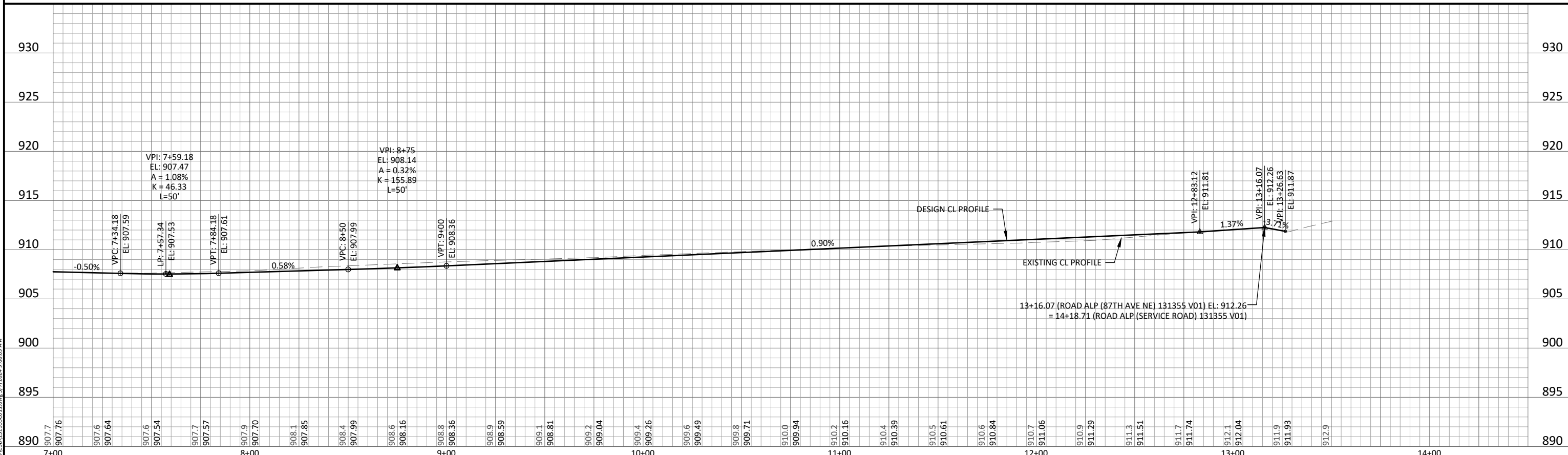
DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024
CHECKED	TJP			
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STREET IMPROVEMENTS
 89TH AVENUE NE

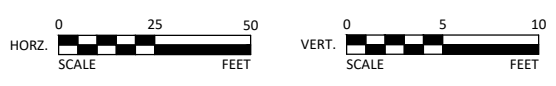
SHEET
C6.09



- NOTES**
1. REMOVE EXISTING BITUMINOUS PAVEMENT AND EXISTING DRIVEWAY APRONS TO LIMITS MARKED IN FIELD BY THE ENGINEER. SEE SHEET C0.04 FOR REMOVAL PLANS.
 2. SEE SHEET C6.23 FOR INTERSECTION DETAILS.
 3. SEE SHEET C7.14 FOR SIGNING AND PAVEMENT MARKING PLAN.
 4. SEE SHEETS C8.16 - C8.20 FOR CROSS SECTIONS.



© Bolton & Menk, Inc. 2024. All Rights Reserved. 131355 V01.dwg 5/7/2024 9:08:09 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

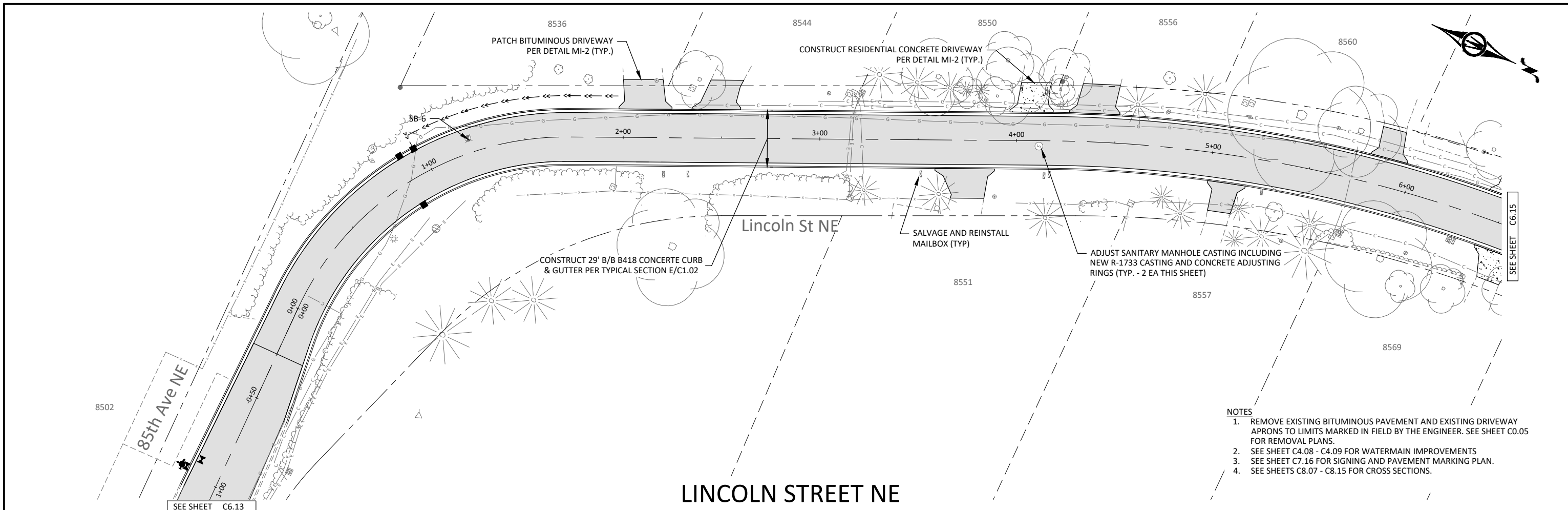


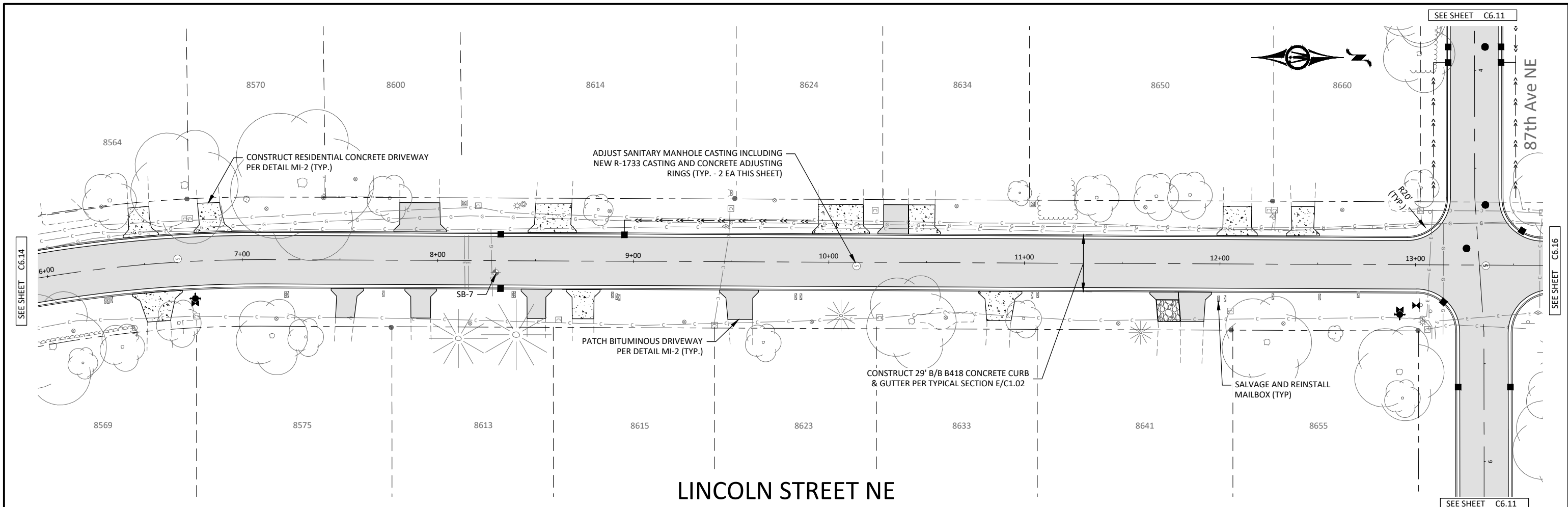
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024
CHECKED	TJP			
CLIENT PROJ. NO.	24-07			

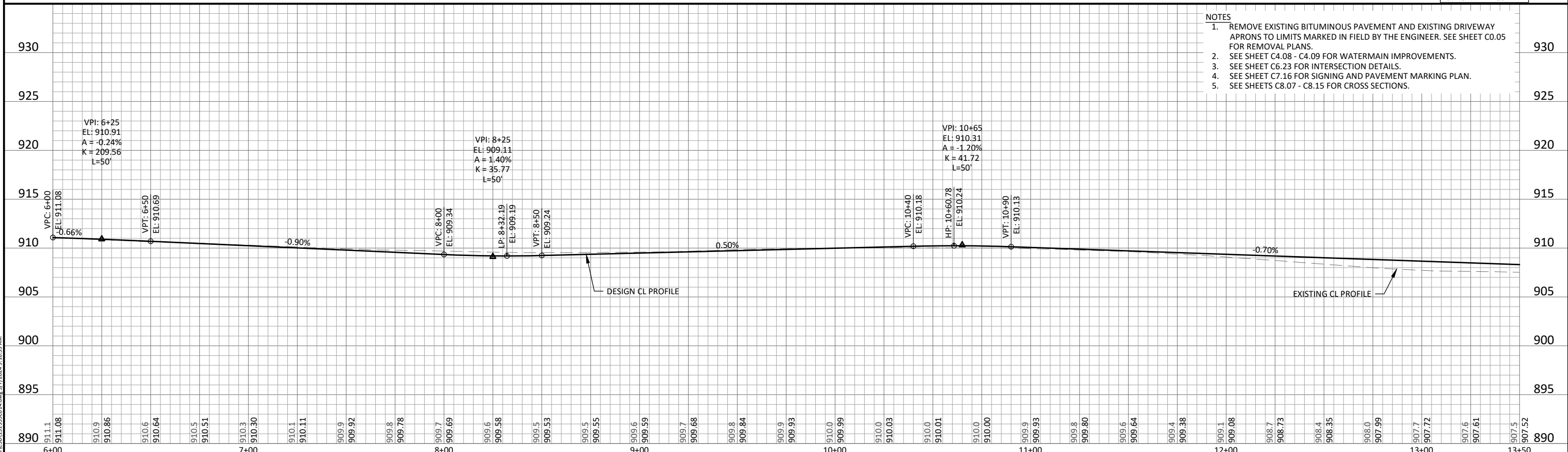
BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STREET IMPROVEMENTS
 87TH AVENUE NE

SHEET
C6.12



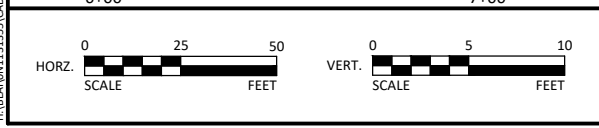


LINCOLN STREET NE



- NOTES
1. REMOVE EXISTING BITUMINOUS PAVEMENT AND EXISTING DRIVEWAY APRONS TO LIMITS MARKED IN FIELD BY THE ENGINEER. SEE SHEET C0.05 FOR REMOVAL PLANS.
 2. SEE SHEET C4.08 - C4.09 FOR WATERMAIN IMPROVEMENTS.
 3. SEE SHEET C6.23 FOR INTERSECTION DETAILS.
 4. SEE SHEET C7.16 FOR SIGNING AND PAVEMENT MARKING PLAN.
 5. SEE SHEETS C8.07 - C8.15 FOR CROSS SECTIONS.

© Bolton & Menk, Inc. 2024. All Rights Reserved. A:\BOLTON\13353535\CAD\3D\13353535.dwg 5/7/2024 9:10:53 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

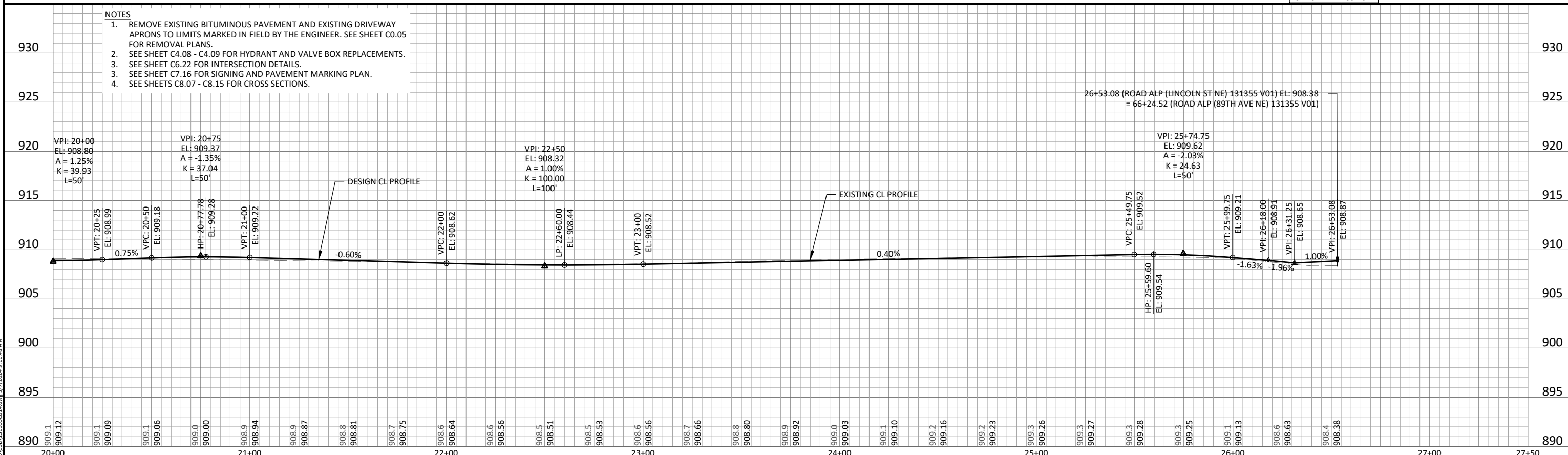
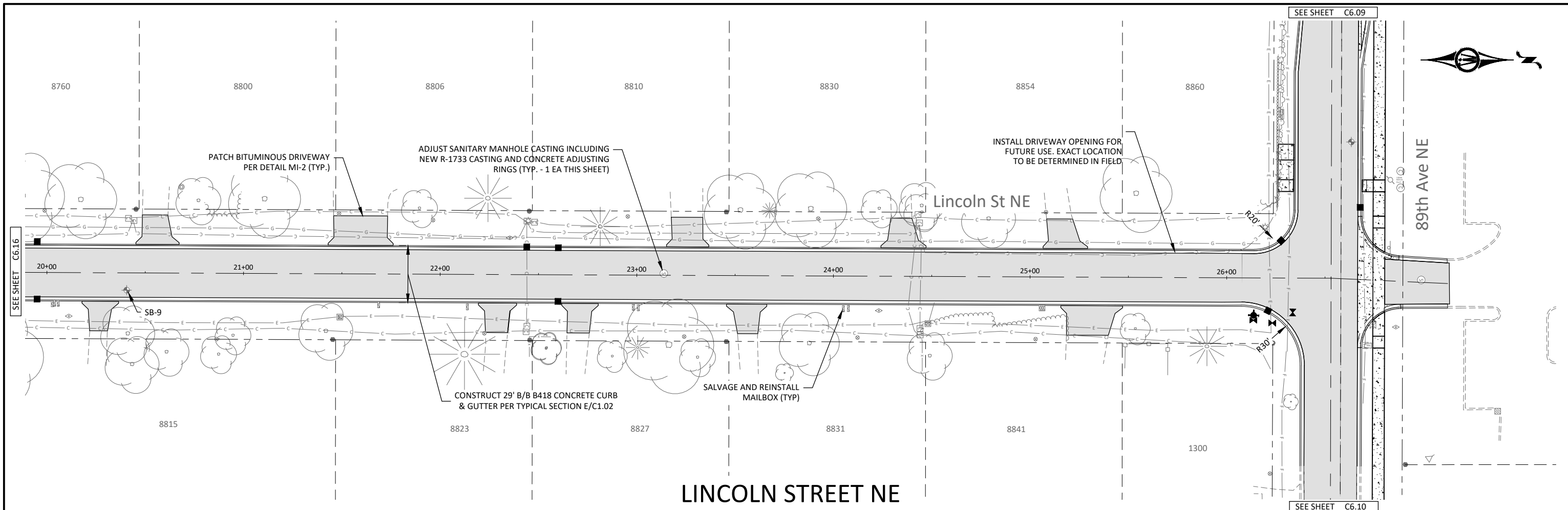


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

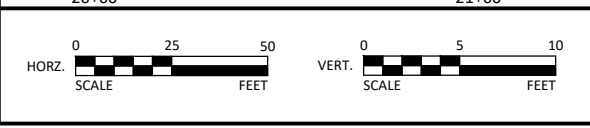
DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024 05/06/2024
CHECKED	TJP			
CLIENT PROJ. NO.	24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STREET IMPROVEMENTS
 LINCOLN STREET NE

SHEET
C6.15



© Bolton & Menk, Inc. 2024. All Rights Reserved. 131355 V01.dwg (3/13/24) 5/7/2024 9:11:48 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

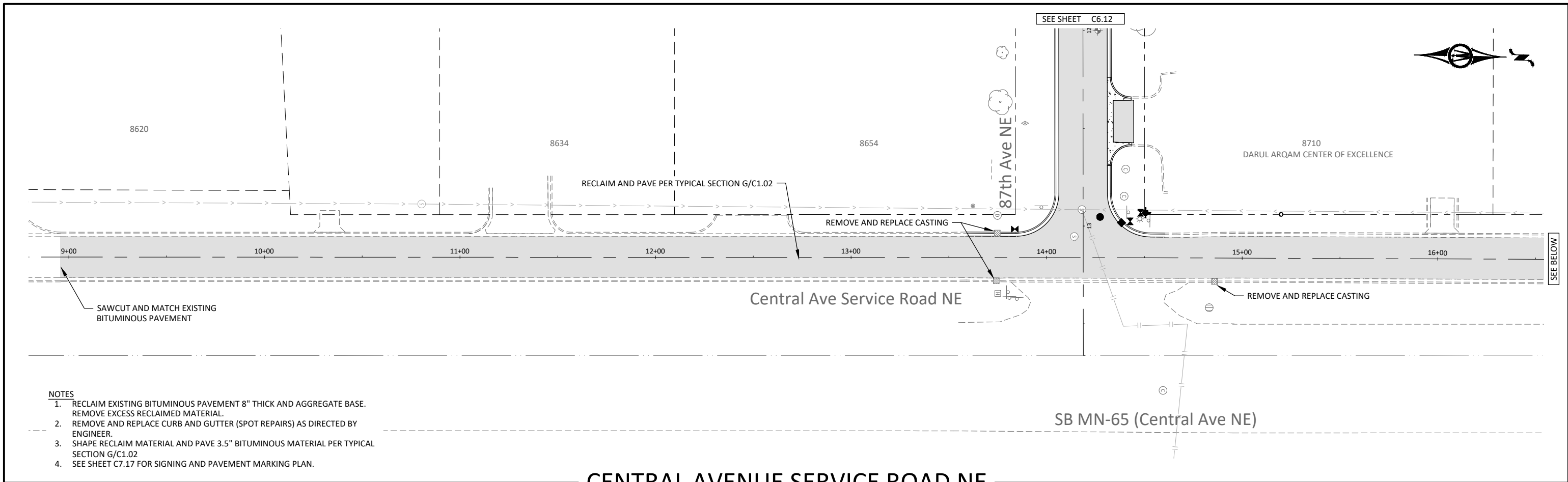


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	MSN	NO.	ISSUED FOR	DATE
DRAWN	DJT	0	BID CON	04/01/2024
CHECKED	TJP			05/06/2024
CLIENT PROJ. NO.	24-07			

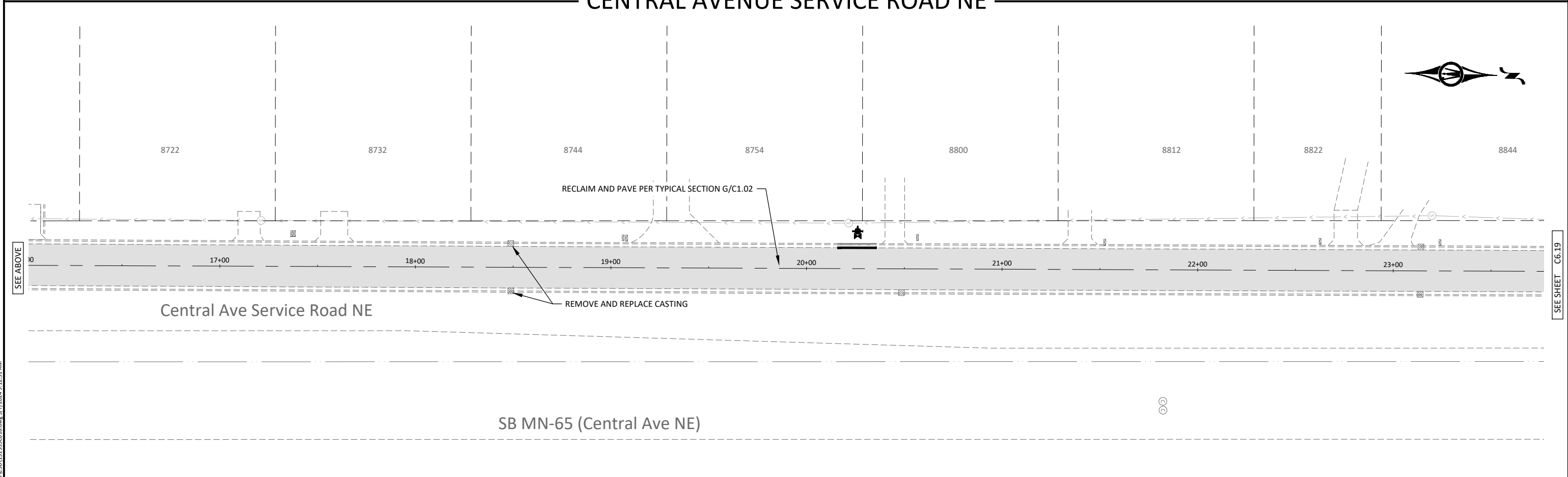
BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STREET IMPROVEMENTS
 LINCOLN STREET NE

SHEET
C6.17



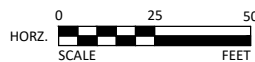
- NOTES**
1. RECLAIM EXISTING BITUMINOUS PAVEMENT 8" THICK AND AGGREGATE BASE. REMOVE EXCESS RECLAIMED MATERIAL.
 2. REMOVE AND REPLACE CURB AND GUTTER (SPOT REPAIRS) AS DIRECTED BY ENGINEER.
 3. SHAPE RECLAIM MATERIAL AND PAVE 3.5" BITUMINOUS MATERIAL PER TYPICAL SECTION G/C1.02
 4. SEE SHEET C7.17 FOR SIGNING AND PAVEMENT MARKING PLAN.

CENTRAL AVENUE SERVICE ROAD NE



SB MN-65 (Central Ave NE)

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 10:53:53 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

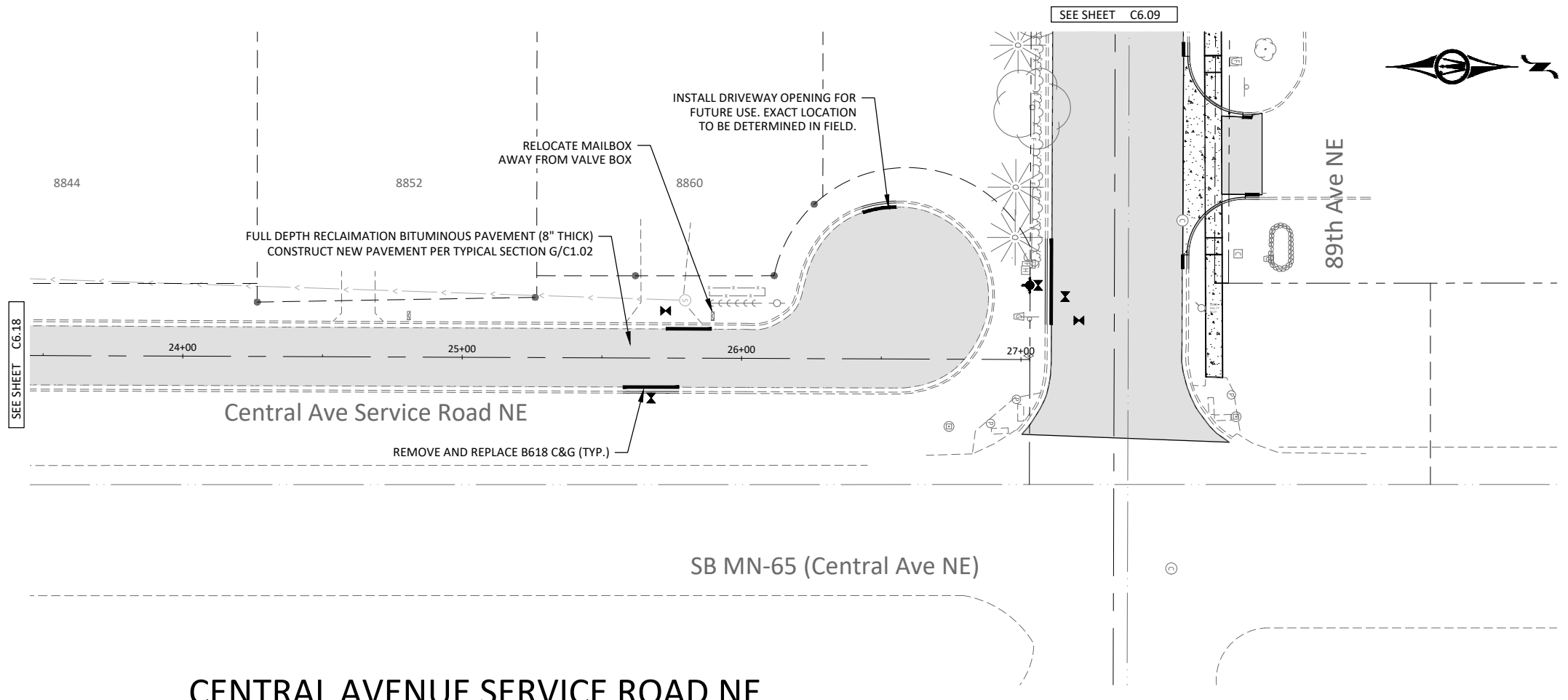


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STREET IMPROVEMENTS
 CENTRAL AVENUE SERVICE ROAD

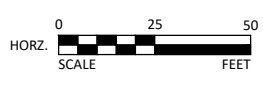
SHEET
C6.18



- NOTES**
1. RECLAIM EXISTING BITUMINOUS PAVEMENT 8" THICK AND AGGREGATE BASE. REMOVE EXCESS RECLAIMED MATERIAL.
 2. REMOVE AND REPLACE CURB AND GUTTER (SPOT REPAIRS) AS DIRECTED BY ENGINEER.
 3. SHAPE RECLAIM MATERIAL AND PAVE 3.5" BITUMINOUS MATERIAL PER TYPICAL SECTION G/C1.02
 4. SEE SHEET C7.17 FOR SIGNING AND PAVEMENT MARKING PLAN.

CENTRAL AVENUE SERVICE ROAD NE

© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 11:33:53 AM C:\3D\131353618.dwg 5/7/2024 9:13:08 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Michael S. Nill

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024

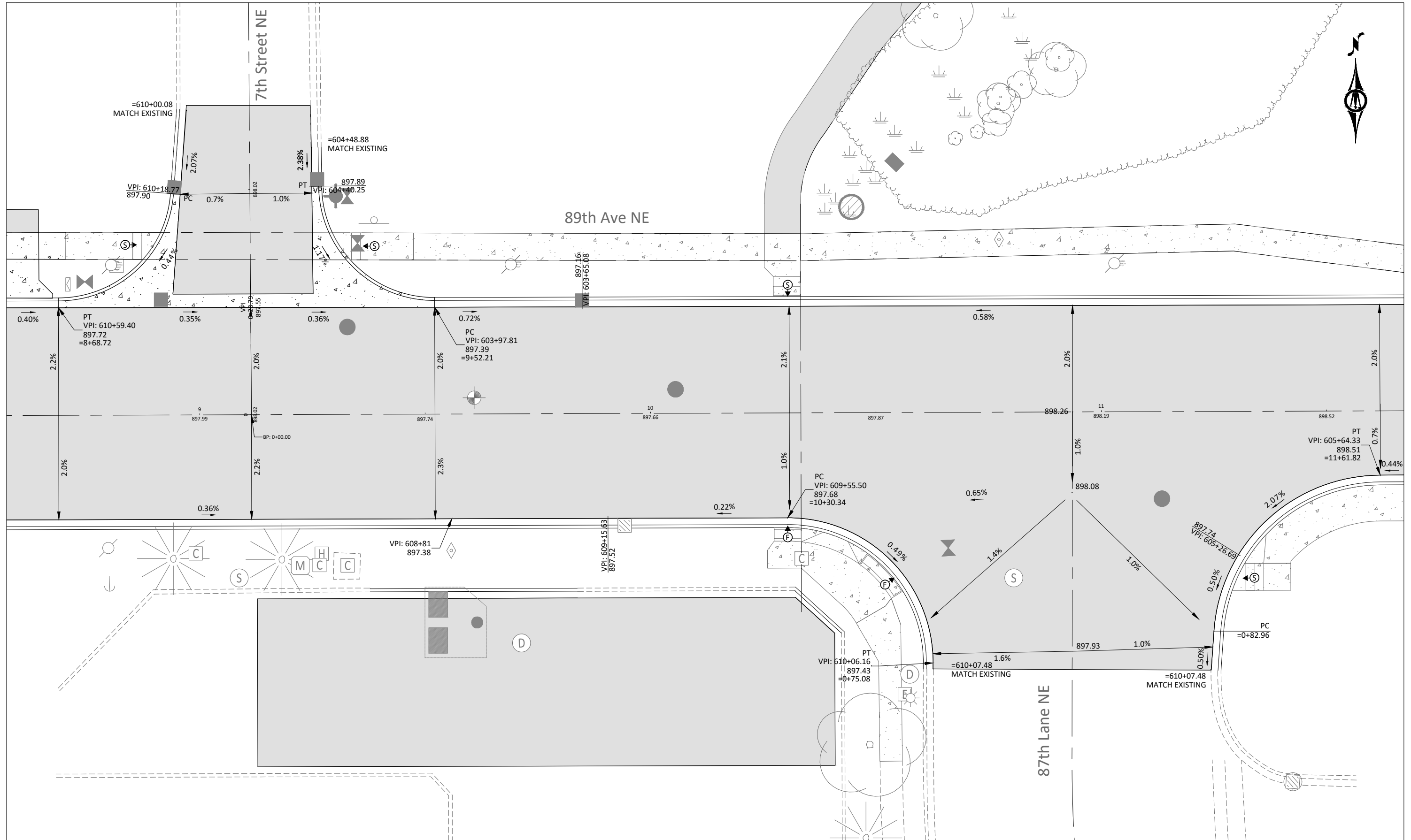


3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

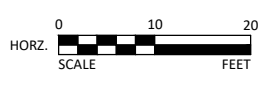
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
		CON	05/06/2024
DRAWN			
DJT			
CHECKED			
TJP			
CLIENT PROJ. NO.			
24-07			

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 STREET IMPROVEMENTS
 CENTRAL AVENUE SERVICE ROAD

SHEET
C6.19



© Bolton & Menk, Inc. 2024. All Rights Reserved. 11/13/2024 10:53:52 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED
 BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED
 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



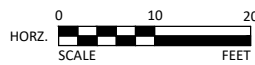
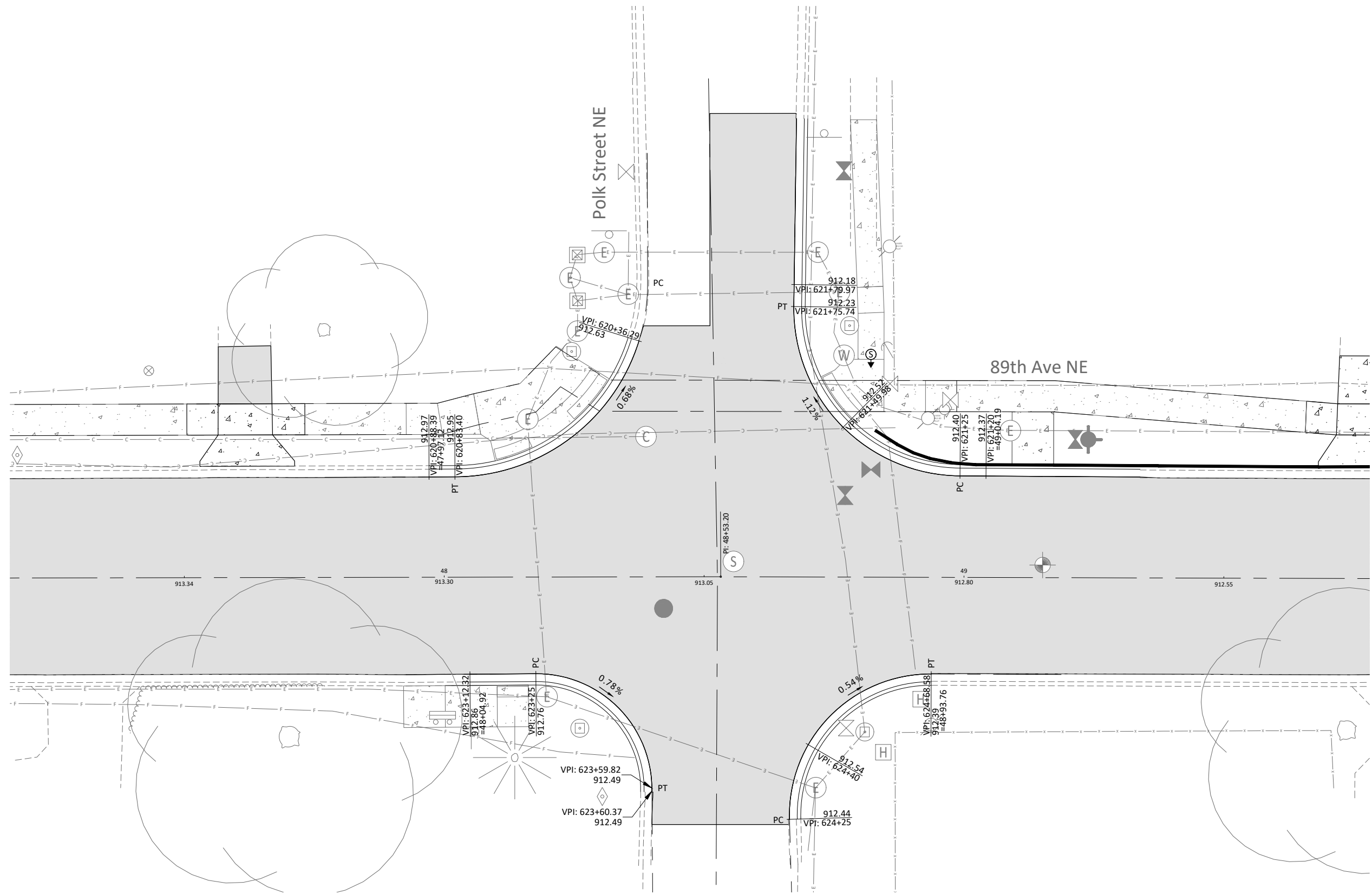
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 INTERSECTION DETAILS
 89TH AVE & 7TH ST NE AND 89TH AVE & 87TH LANE

SHEET
 C6.20



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



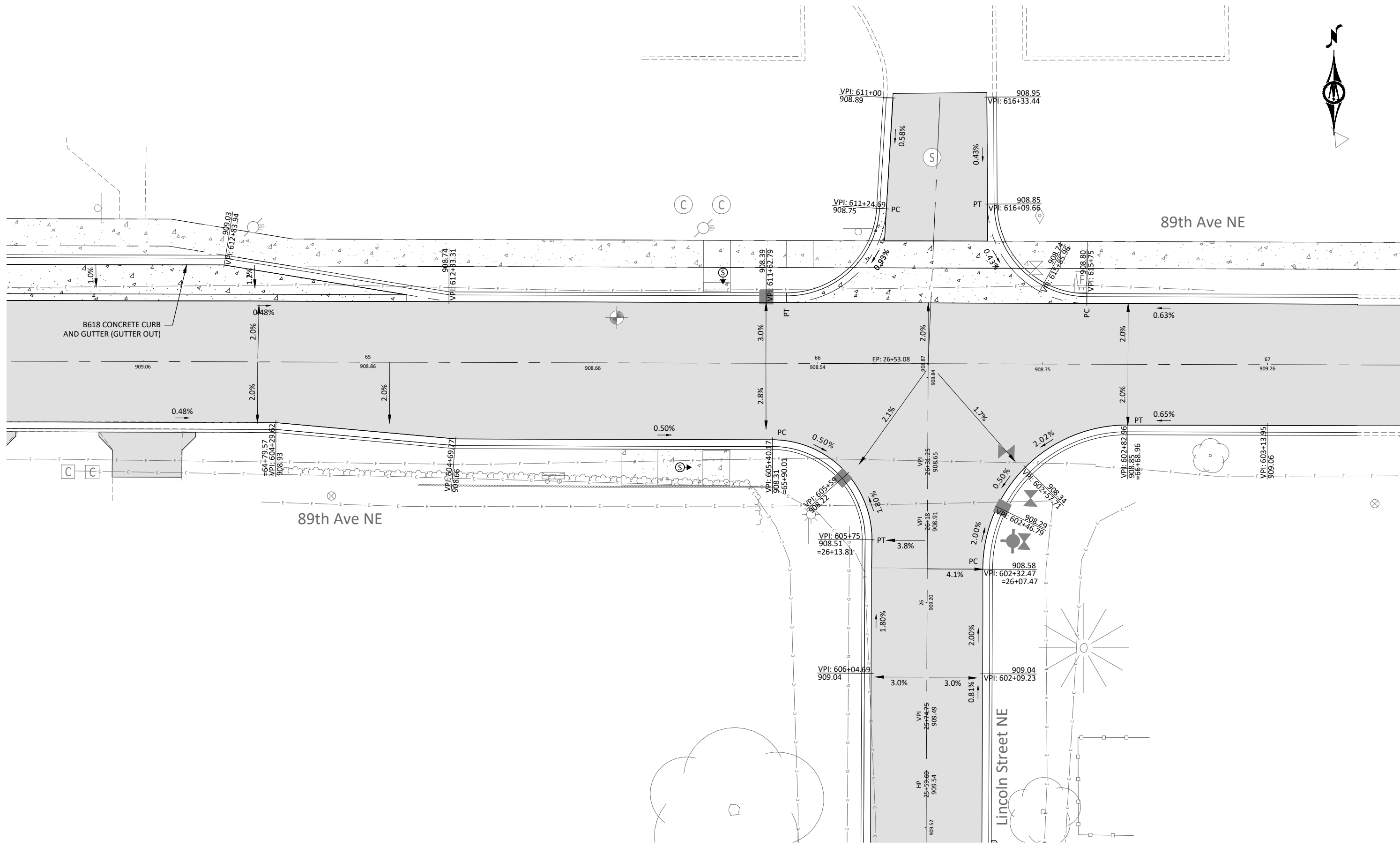
3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

SAP 106-139-004

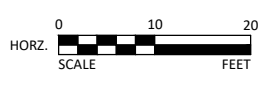
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT	0	CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 INTERSECTION DETAILS
 89TH AVE & POLK ST

SHEET
C6.21



© Bolton & Menk, Inc. 2024. All Rights Reserved. 13/01/2024 10:57:23 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
LIC. NO. 26914 DATE 04/01/2024



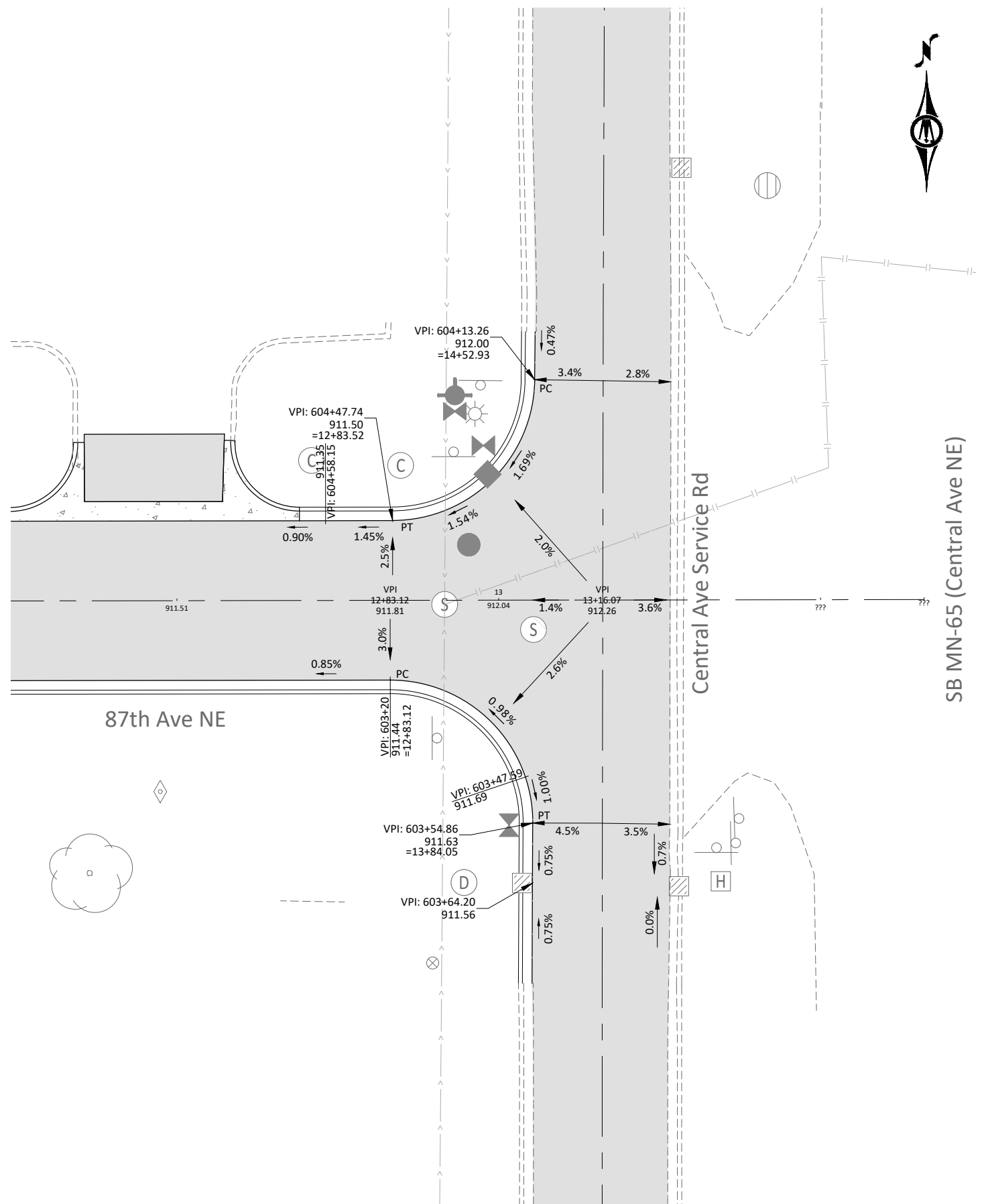
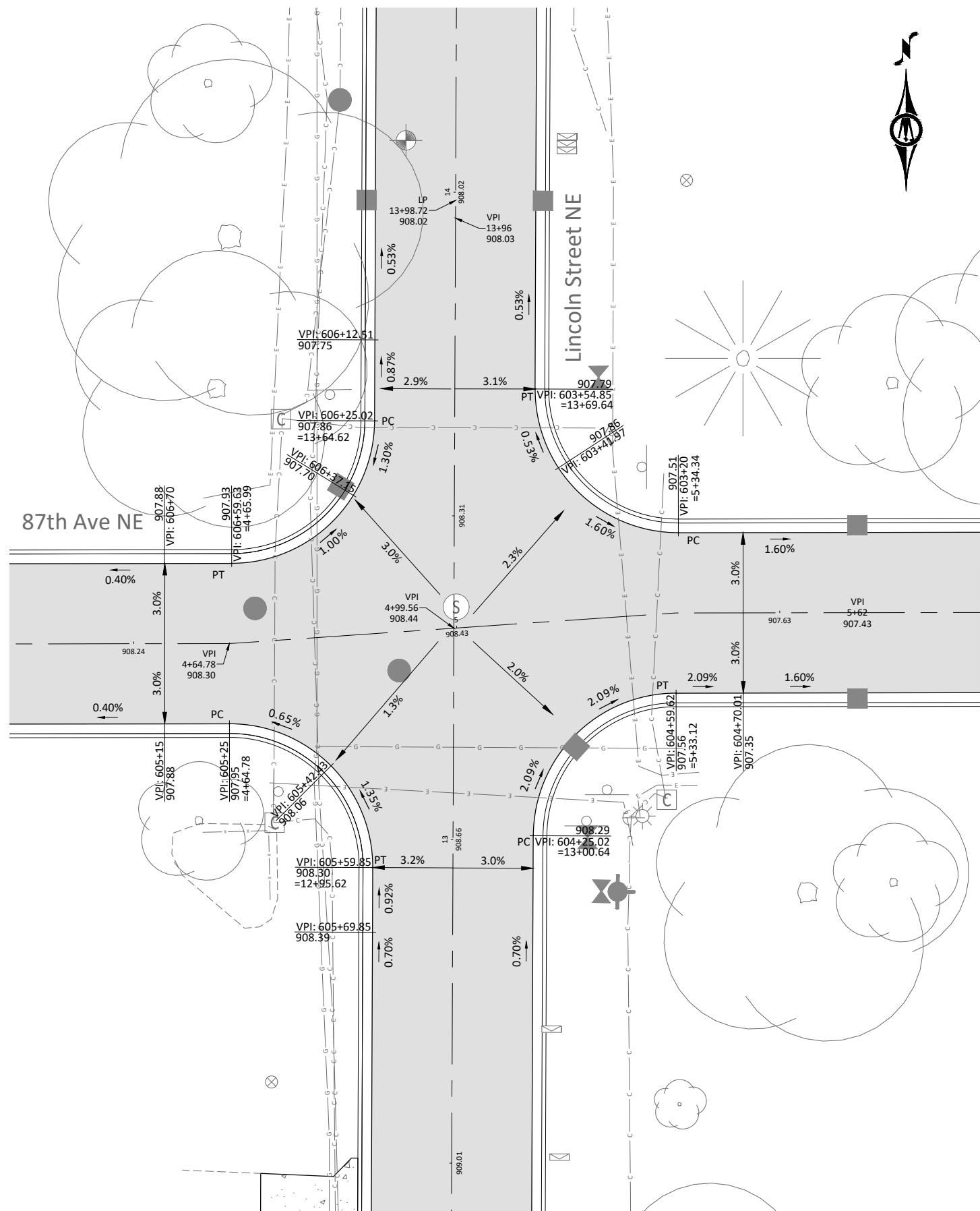
3507 HIGH POINT DRIVE NORTH
BLDG. 1 SUITE E130
OAKDALE, MINNESOTA 55128
Phone: (651) 704-9970
Email: Oakdale@bolton-menk.com
www.bolton-menk.com

SAP 106-139-004

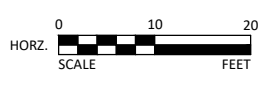
DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
2024 SOUTHWEST AREA STREET RECONSTRUCTION
INTERSECTION DETAILS
89TH AVE & LINCOLN ST

SHEET
C6.22



© Bolton & Menk, Inc. 2024. All Rights Reserved.
 11/13/2024 11:33:53 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED
 BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED
 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MICHAEL S NILL
 LIC. NO. 26914 DATE 04/01/2024



3507 HIGH POINT DRIVE NORTH
 BLDG. 1 SUITE E130
 OAKDALE, MINNESOTA 55128
 Phone: (651) 704-9970
 Email: Oakdale@bolton-menk.com
 www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
MSN	0	BID	04/01/2024
DJT		CON	05/06/2024
CHECKED			
TJP			
CLIENT PROJ. NO.	24-07		

BLAINE, MINNESOTA
 2024 SOUTHWEST AREA STREET RECONSTRUCTION
 INTERSECTION DETAILS
 87TH AVE & LINCOLN ST AND 87TH AVE & CENTRAL AVE SERVICE ROAD

SHEET
C6.23

Background

6PPD-Q is a compound used to prevent tires from degrading and cracking, ensuring driver safety. It is released from tires through normal wear. Once on the roads and in the atmosphere, it can enter streams through dust transport, rain, and storm runoff where fish and other organisms can be exposed.

Coho salmon are particularly sensitive to exposure to 6PPD-Q, and current research is showing other fish like brook trout and rainbow trout are also affected.

It has been characterized as the second most toxic chemical for aquatic animal life, and has been detected in human urine, raising concerns for human health.

There remain many questions about 6PPD-Q that need to be answered to understand its effects on the environment, wildlife, and people - including how it moves throughout the environment, at what levels is it found in water and sediment, how animals and people are exposed, effects of exposure, and how long 6PPD-Q lasts in these various locations.

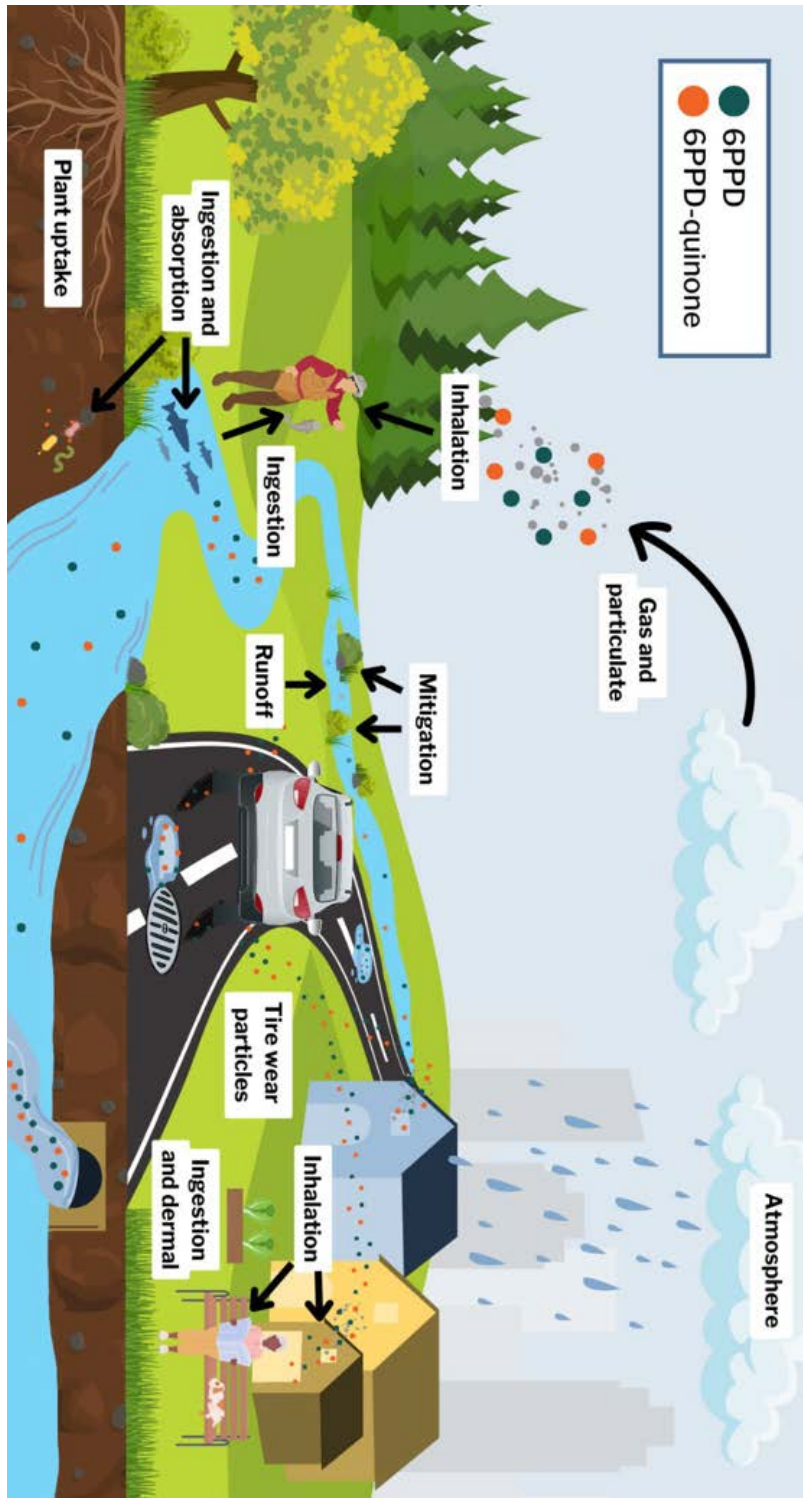
The U.S. Geological Survey (USGS) is studying 6PPD-Q and, through the Environmental Health Program's Integrated Science Teams and multiple Water Science Centers, has a wide range of capabilities uniquely positioned to study the movement, fate, and effects of 6PPD-Q in the environment.

- USGS Scientists are developing methods to understand movement, transport, and fate of 6PPD-Q, as well as uptake by aquatic organisms to develop effective treatment methods.
 - As part of this, analytical methods to understand 6PPD-Q stability, persistence, and accumulation in sediments and in organisms (bioaccumulation in individuals, and biomagnification up food webs) are being developed.
- USGS scientists have developed methods to test the safety of alternative tire additives.
 - USGS is working with international, Federal, State, and Tribal agencies, as well as the tire manufacturing industry to find chemical alternatives that are safer for the environment and still support long-lasting tires and safe driving.

(excerpted from <https://www.usgs.gov/programs/environmental-health-program/science/6ppd-quinone>)

Partnership with CCWD

The USGS Upper Midwest Water Science Center has reached out to CCWD and other local partners to help with research on the prevalence of CECS, including 6PPD-Q, in stormwater, and the ability for stormwater BMPs to effectively remove them. Two CCWD biochar and iron-enhanced sand stormwater filters were selected as study sites: Woodcrest and Epiphany Creek Filters, both in Coon Rapids. They can show specific effectiveness of biochar compared with iron-enhanced sand mixtures.



Conceptual diagram of 6PPD (green circles) and 6PPD-Q (orange circles) sources, movement, and fate in the environment.

Shown with permission from the Washington State Department of Ecology.